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GO HOME

Maintaining office space is expensive. Here's how to make large-scale telecommuting work. Page 40

BY MERIDITH LEVINSON

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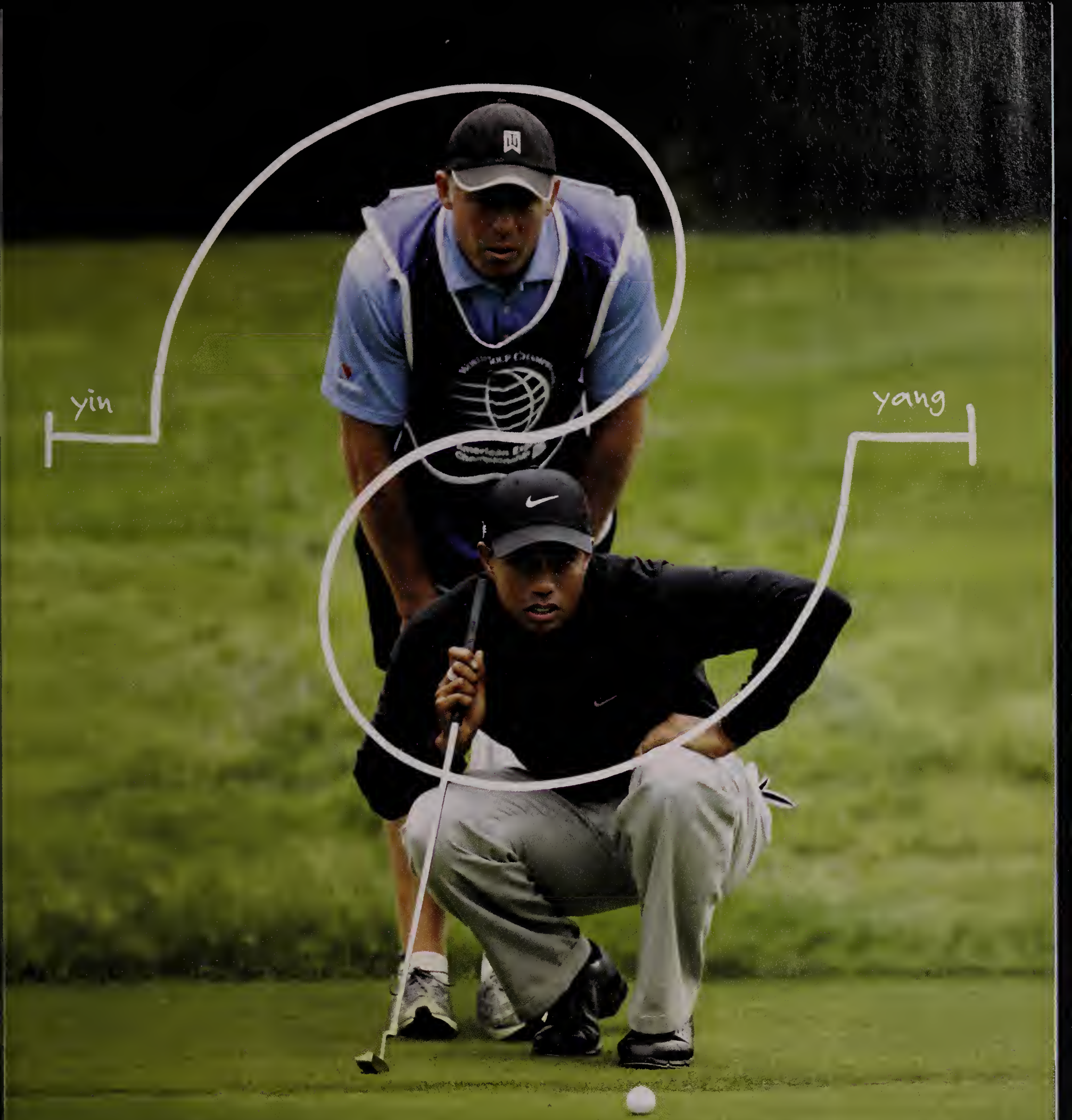

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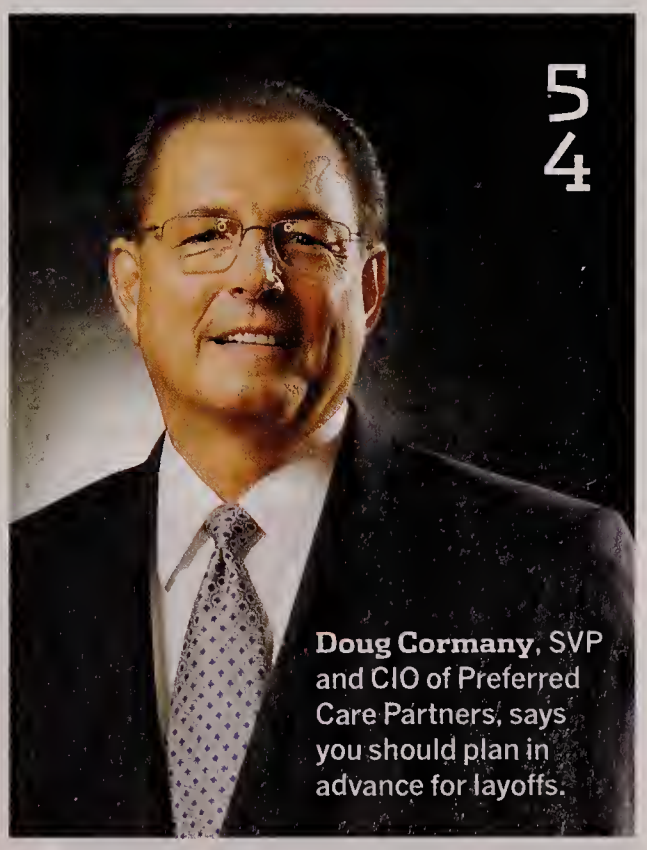

Doug Cormany, SVP and CIO of Preferred Care Partners, says you should plan in advance for layoffs.

COVER PHOTO-ILLUSTRATION BY STEPHEN WEBSTER

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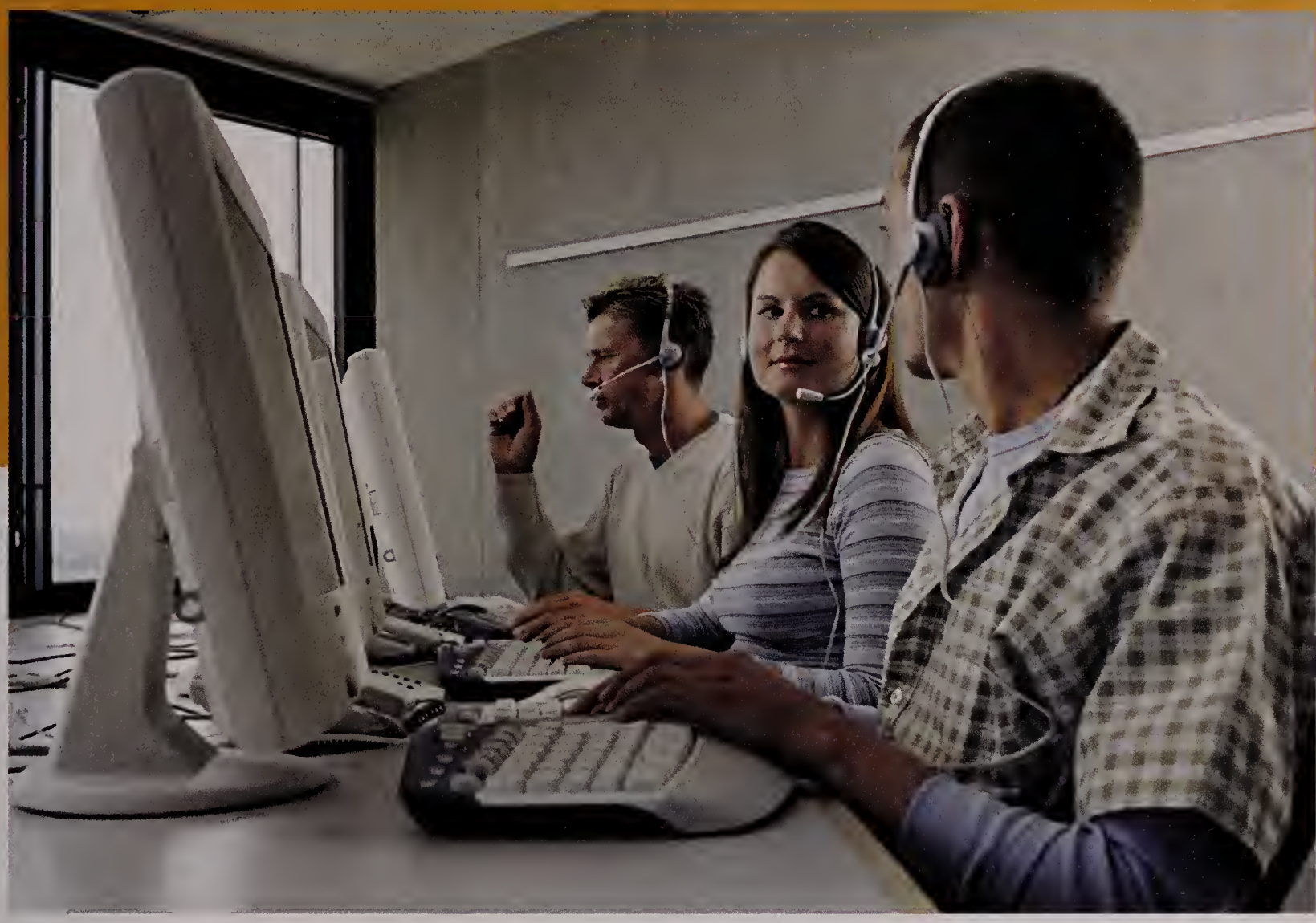

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Crisis Time

What to do when incrementalism just isn't enough

November's CIO Year Ahead Summit wrapped up with an open "town hall" session in which participants tackled the toughest problems in IT. Our starting premises:

- The current global economic crisis affects companies across all industries.
- Trimming and tweaking won't suffice; you need to think in terms of crisis management.
- Budgets, people, operations and supplier relations will all need to change.

Seven members of the CIO Hall of Fame led tabletop discussions, then convened onstage to share their own and their groups' ideas for navigating a turbulent 2009. Here are some of the highlights:

You have to cut services, plain and simple. Some people scoffed and said, "They [businesspeople] will never go for it." These people clearly weren't thinking in crisis mode yet. Advice from the Hall of Famers: Start having conversations now with business leaders about priorities and what services you'd cut if needed. That will simplify things when the time comes.

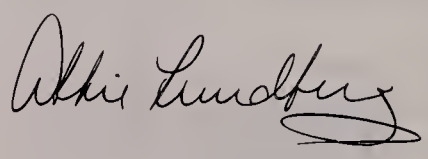
Keith Morrow, CIO at Blockbuster (a business that entered emergency mode well ahead of the current recession), said his executive team developed three contingency plans: expected, worst case and better case. Doreen Wright, former CIO of Campbell Soup, suggested an exercise in which you pretend you're bankrupt and talk about what you have to do to survive. Then look at what you can add back. That will get you much further than making cuts based on your current budget.

Get your vendors to pony up, said former Motorola CIO Patty Morrison. Have an adult conversation: We need you to take out 25 percent of our costs; what do we need to change to do that?

Stop capital expenditures quickly—that will give you some breathing room to find other areas of efficiencies.

Develop tight telecommuting policies. Why spend all that money on facilities for staff who could just as easily work from home? Deploy converged devices (and keep multiple redundant devices to a minimum). Use desktop virtualization to avoid the costs of moving equipment when employees change their workspace.

A common theme underlying everything: You have to know your data, your own numbers and your cost of consumption, in order to have intelligent conversations about where to invest and cut back in the first place.



Abbie Lundberg, Editor in Chief
lundberg@cio.com

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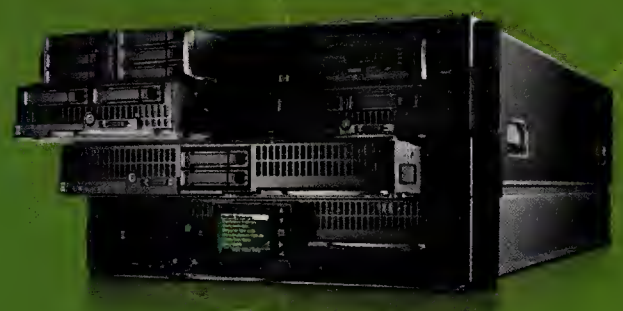

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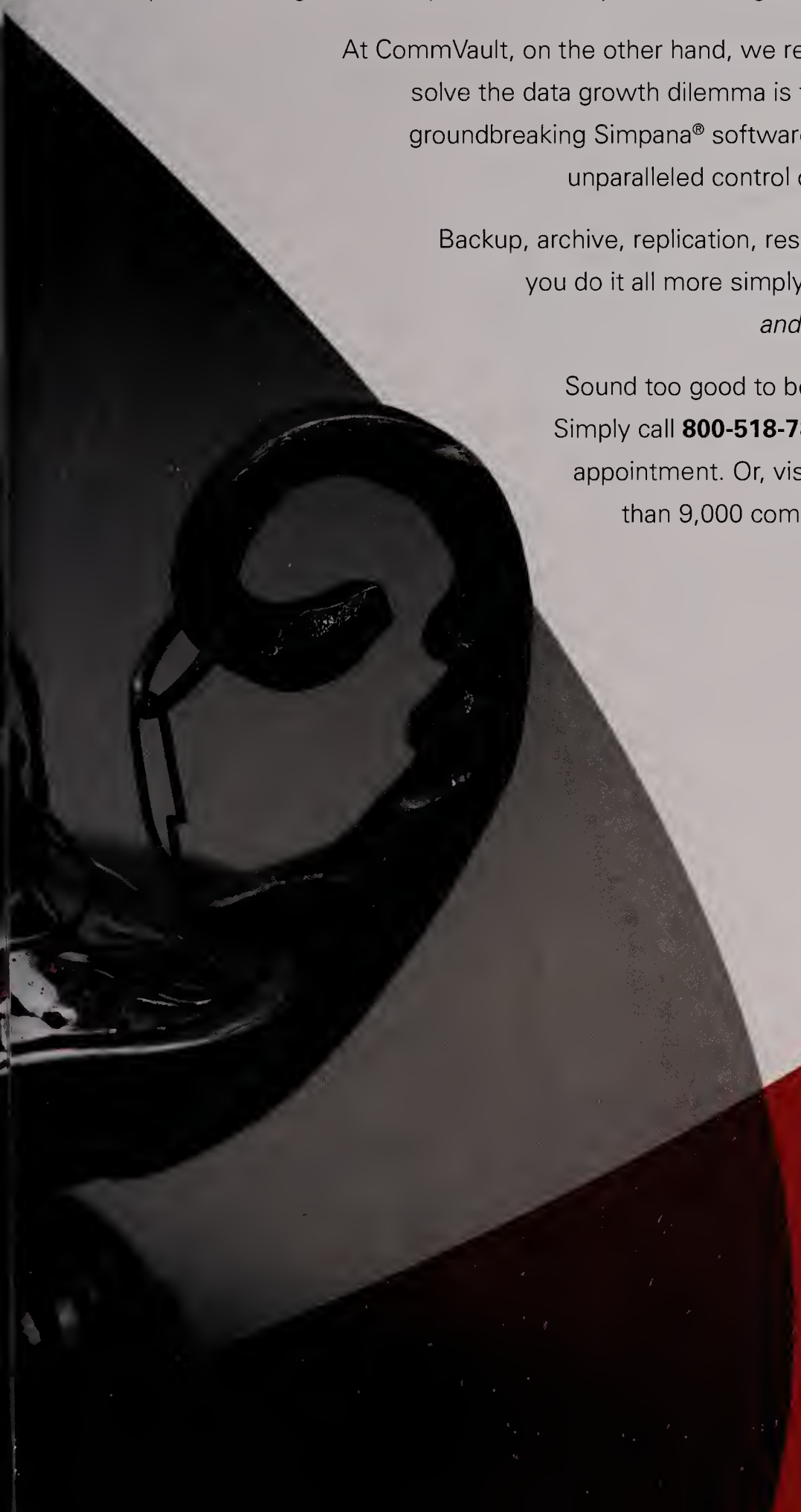

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Rotten Code

Legacy systems won't run forever. Are you ready?

When Vint Cerf, the father of the Internet speaks out on a topic, you should listen.

Cerf has recently expressed concern about "bit rot." What's that? Wikipedia describes bit rot as a "computing term used either to describe gradual decay of storage media or to facetiously describe the spontaneous degradation of a software program over time."

In an industry so accustomed to looking forward to the "new new thing" (to borrow from writer Michael Lewis), bit rot could bring your company's operations to a grinding halt.

Every reader of this column has bit rot festering in their infrastructure. Some prime examples are millions of lines of legacy code that have operated smoothly for decades and then one day just don't work. Often this happens because obscure, latent code embedded deep within a strategically important legacy application doesn't play nice with new software you are installing.

Young programmers often make fun of bit rot. But according to Cerf it's no laughing matter, particularly when your firm has no tech workers with the 20th-century skill sets who can dive deep into the problematic code to correct it.

How bad is the labor side of the bit rot problem? It's a hidden consequence of the coming Baby-Boomer retirement brain drain. The older workers in this group (now in their midfifties to midsixties) started their careers programming in Unix, Cobol and Basic. The younger ones (in their midforties to midfifties) worked with DB2, VisiCalc and MS-DOS.

Unless you are a relatively new start-up company, I can guarantee you that legacy code written in now little-used languages is running and running well in your enterprise. But it won't run forever.

The blogosphere seems to have settled on a three-part attack to conquer bit rot. First, determine just how much of your company's critical applications and operating systems run on legacy code. Next, take a suggestion from Cerf and ask yourself how accessible the really critical legacy code is. And finally, retain or recruit workers with the skill sets to make your 20th century code run efficiently in the 21st century.

Do it now, or watch your infrastructure fall apart bit by bit. Or maybe faster.

Gary J. Beach

Gary Beach, Publisher Emeritus
gbeach@cio.com

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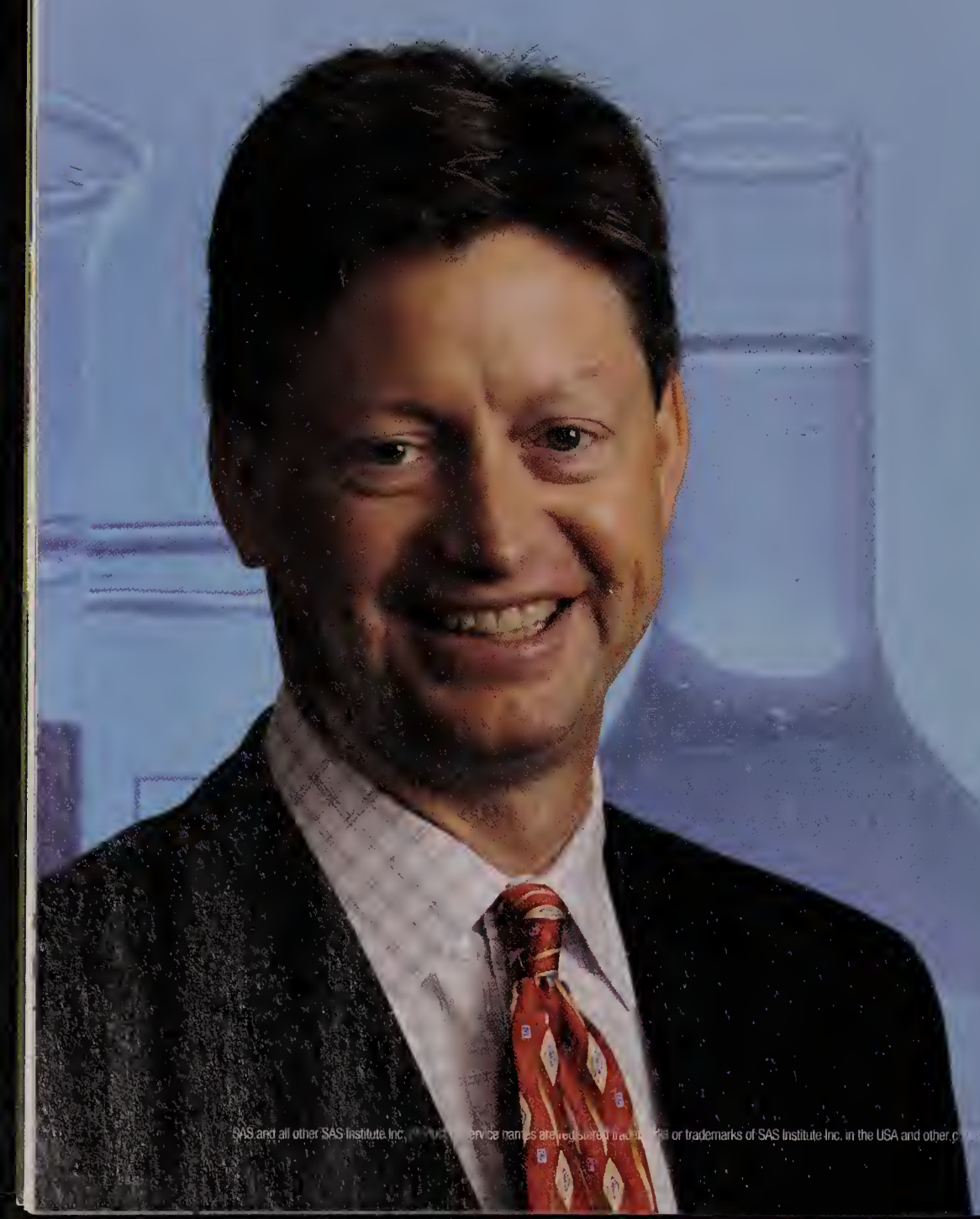

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trendlines

EDITED BY STEFF GELSTON | NEW * HOT * UNEXPECTED

Indian Outsourcers Jittery After Obama Win

POLITICS Senator Barack Obama's victory in the U.S. presidential election has left India's outsourcing industry feeling a little nervous. But there is the expectation in industry circles that, in the end, economic pragmatism will prevail.

In his speech accepting the Democratic Party's presidential nomination, Obama said that as president he would stop giving tax breaks to companies that ship jobs overseas and start giving them to companies that create U.S. jobs. That could spell trouble for India's outsourcers, which get most of their revenue from the U.S.

There are fears that in the current protectionist mood, companies in the U.S. that are already battling an economic crisis will cut costs by reducing discretionary work sent offshore to countries such as India, according to an analyst who declined to be quoted.

In congratulating Obama on his victory, India's National Association of Software and Service Companies (Nasscom) said it supports expanding the H-1B visa program to allow more skilled workers from abroad. As it helps to meet skills shortages in the U.S., the H-1B visa program can help U.S. companies lead the way on innovation and contribute additional *Continued on Page 16*

Other Nations Moving Up on U.S. IT Industry

TECHNOLOGY The U.S. has the world's best environment for a competitive IT industry but other countries are catching up, according to a study sponsored by the Business Software Alliance (BSA).

The U.S. retains its number-one ranking from a year ago, and it ranks in the top five in all six categories that the Economist Intelligence Unit used to evaluate countries' IT environments. But U.S. broadband infrastructure, including broadband penetration, ranks behind many countries in Western Europe and East Asia, and the U.S. is facing a shortage of skilled tech workers, the study said.

U.S. lawmakers must focus on the nation's IT needs for it to remain the IT innovation leader, says Robert Holleyman, the BSA's president and CEO. The U.S. score, based on a 100-point scale, fell between 2007 and 2008, from 77.4 to 74.6.

"A deterioration in U.S. performance is possible should tougher immigration controls have a negative impact on the pool of IT talent and the skills base," the study said. "And as the U.S. and Western European economies endure a downturn, the impacts of a heavier regulatory touch and slower growth of technology spending cannot be discounted."

Taiwan, the U.K., Sweden, Denmark and Canada all moved up in the rankings from 2007, with Taiwan jumping from number six to number two. Japan, ranked second last year, fell to number 12; South Korea fell from third to eighth. The study ranks overall business environment, IT infrastructure, human capital, legal environment, research and development environment, and support for IT industry development. *–Grant Gross*

PHOTO BY AP/WIDE WORLD PHOTOS

How Snoops Can **Snag** Your Keystrokes

SECURITY Computer keystrokes can be snooped from afar by detecting the slight electromagnetic radiation emitted when a key is pressed, according to new research.

Other security experts have theorized that keyboards were vulnerable to such detection, wrote Sylvain Pasini and Martin Vuagnoux, both doctorate students with the Security and Cryptography Laboratory at the Ecole Polytechnique Fédérale de Lausanne in Switzerland.

But Vuagnoux and Pasini believe that theirs is the first set of experiments showing such spying is feasible. They faulted cost pressures on keyboard manufacturers for not making keyboards more snoop proof. Keyboards "are not safe to transmit sensitive information," they wrote in an entry on the school's website. "No doubt that our attacks can be significantly improved since we used relatively inexpensive equipment."

They tested 11 different wired keyboard models produced between 2001 and 2008, including some with USB connectors and keyboards embedded in laptops. All were vulnerable to one of four surveillance methods.

Videos posted show two different experiments, both of which accurately picked up the typed text. The first shows a white Logitech keyboard with a PS/2 connector that was attached to a laptop for power. It was monitored with a simple one-meter wire cable about a meter away. After typing "trust no one" on the keyboard, the same phrase is returned on the researchers' monitoring equipment. In a second video, a larger antenna picked up keystrokes through an office wall. Various experiments showed they could monitor keystrokes from as far away as 20 meters.

Vuagnoux and Pasini have a paper in peer review detailing the technique. It will be released soon at an upcoming conference.

–Jeremy Kirk

Outsourcers

Continued from Page 15

jobs and economic growth in the country, a Nasscom spokeswoman says.

The H-1B visa program has previously come under criticism from some U.S. senators who say it was being used to displace qualified American workers with foreign employees. But many U.S. technology companies say the program provides skilled workers that they can't find easily here.

The uncertainty in India about the impact of Obama's presidency on Indian outsourcing was also reflected by the country's Finance Minister P. Chidambaram, referring to Obama's comments on outsourcing.

"A comment here or a comment there should not bother us," Chidambaram told reporters. "Once Obama is in office, he will realize that it is an interconnected world, and countries have to work together."

Some analysts hold that the fears may be exaggerated as a U.S. economic recovery will depend largely on cutting costs, which offshore outsourcing offers.

Obama's comments about bringing jobs to the U.S. were primarily in the context of manufacturing jobs, according to Gartner.

"In a specialized field like IT, it is not just a matter of 'choosing' to outsource overseas or not, but the issue of skills availability locally," says Partha Iyengar, a vice president at Gartner.

There is usually a lot of rhetoric in the run-up to an election, says Siddharth Pai, a partner at sourcing consultancy firm Technology Partners International. Before pushing through any protectionist legislation, any president will have to seriously consider that outsourcing and offshoring offer direct cost-benefits to U.S. companies, and will keep the country competitive, he adds.

–John Ribeiro

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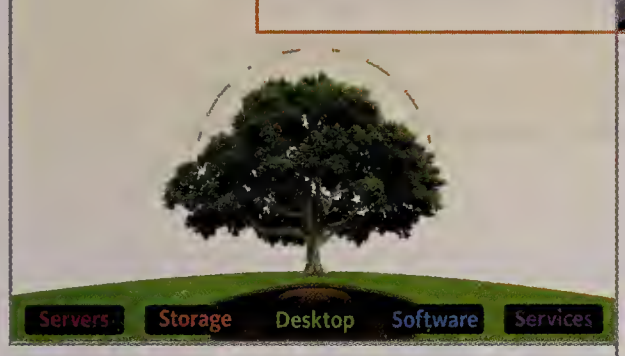

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GM Bets on Visual Modeling Tech

SOFTWARE General Motors (GM), facing possible bankruptcy, has been pursuing efficiencies on the desktop with visual modeling technology that simulates an IT user's experience of a software application before it is deployed. The technology will speed new tool development, cut project costs and increase adoption of IT applications by allowing internal users to weigh in during development, according to GM's Chief Systems and Technology Officer Fred Killeen.

"It's a great way to avoid errors, figure out costs and behaviors," says Gartner analyst Jim Sinur. In the current economic environment, IT is under cost pressures like everyone else. And GM itself is fighting for its life after losing billions of dollars in 2008. At press time, the automaker was seeking federal help to stay afloat.Sinur says that new process technologies allow for the simulation of a process to detect issues early on. Older process technologies required a complete development cycle before finding the issues. "You also had to spend a lot more time modeling before you had a chance to try it out," he says. Visual models also foster collaboration by expediting the ability for far-flung groups to work together, says Marc Halpern, research director in manufacturing advisory services for Gartner.

GM is using visualization software from iRise and a rapid prototyping process developed by Capgemini. The automaker has already implemented a number of business applications built from this modeling process for its manufacturing, human resources and dealer-facing systems. Visual modeling reduced project duration, on average, by 10 percent, according to GM. "We use it early on in any project where we are doing sessions with business customers about how they want the applications to behave and look," says Killeen.

Killeen plans to incorporate IT visual modeling into all of GM's customer-facing applications. "The sooner you deploy, the sooner you get business benefits," he says. "It's less about the development costs and more about the speed to completion."

GM has used visual models before to simulate vehicle design and crash testing. It developed the Production Operations Execution Test Simulator, a tool that simulates the manufacturing plant floor operations and vehicle production, which won a 2008 CIO 100 Award.

–Jarina D'Auria

With Economy in the Red, Green IT Suffers

ENVIRONMENT CIOs have significantly reduced or cut their budgets for green IT initiatives since May, according to a recent survey of 3,500 CIOs and corporate executives by the Brown & Wilson Group, a market research company.

In May, 18 percent of respondents reported that they were designating funds to implement green IT initiatives. As of last month, that number dropped to just seven percent, due in part to the economic crash.

"What we're seeing is that tangible funds that were budgeted for green projects in May have now been reallocated" to other projects, says Doug Brown, managing partner of Brown & Wilson Group and coauthor of *The Black Book of Outsourcing: How to Manage the Changes, Challenges and Opportunities*. "It's indicative of the economy right now."

However, the survey found that more than 97 percent of CIOs consider green computing an important part of their overall IT strategy. And finding green outsourcing partners was considered a key priority by 26 percent of those surveyed. However, dealing with budget cuts was the top priority (61 percent).

The report also found that the majority of U.S. IT executives (61 percent) and their U.K. counterparts (85 percent) believe that outsourcing vendors should be innovating and leading sustainability efforts on the client's behalf as a value-add.

Vendors disagree: 95 percent of outsourcing vendors in India believe that sustainability demands should be at the expense of the customer, as do 23 percent of U.S. vendors and 16 percent of U.K. vendors.

Brown & Wilson also compiled a list of the top green outsourcers. Hewlett-Packard/EDS leads the list, followed by IBM Global, CSC, Oracle and Atos Origin.

–Kristin Burnham

It's what's fashionable in IT this year.

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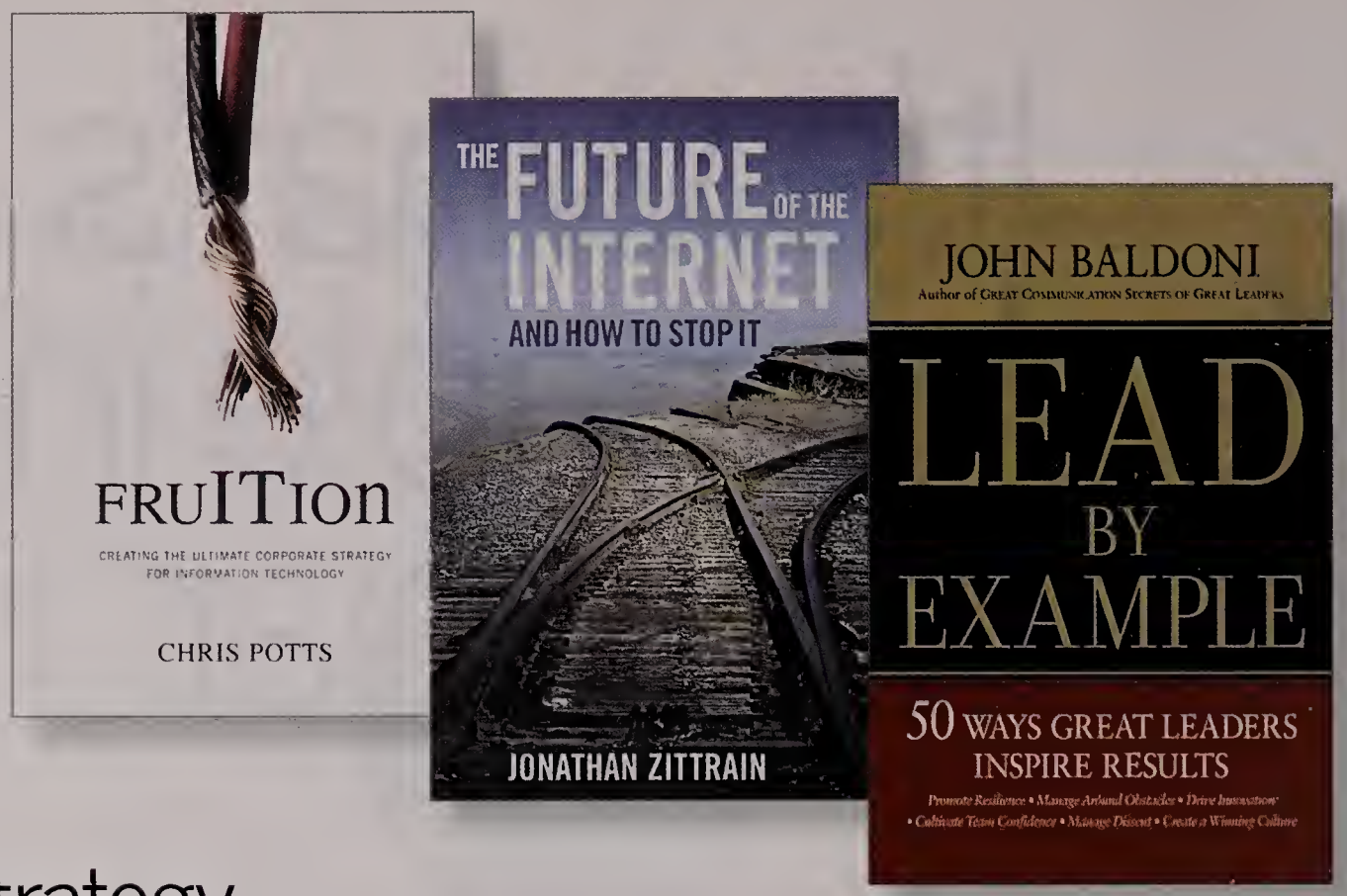

IT Strategy, the Internet and Leadership

BOOKS Travel today—especially around the holidays—often means cooling your heels in some airport lounge waiting for a flight. Put that time to good use with one of these recent books by CIO's contributors.

FrulTion

Creating the Ultimate Corporate Strategy for Information Technology

By Chris Potts

Technics Publications, 2008, $18.95

The business novel is a popular format for probing the intricacies of leadership and decision making. Chris Potts, a consultant with Dominic Barrow (who writes occasionally for CIO), uses it to explore the process through which a CIO learns to create a business strategy that "exploits IT" to its competitive advantage.

Potts's hero, 44-year-old Ian Taylor, has a CEO who thinks his IT strategy is incomprehensible techno-speak. She challenges him to replace it with a single page describing how the company will use IT to achieve its business goals—or look for work elsewhere. It's not easy: Ian's IT portfolio doesn't account for investments that others in the company must make to get the full value from new systems; nor has he mapped IT projects to high-level business objectives.

Sound familiar? Few CIOs today are wholly business strategists, but the role is changing. Potts's narrative spells out how you might change with the times. *–Elana Varon*

The Future of the Internet

And How to Stop It

By Jonathan Zittrain

Yale University Press, 2008, $30

Will cloud computing kill the Internet? That depends, says Jonathan Zittrain, a professor at Harvard Law School and Oxford University. Zittrain observes that we're ceding control of our devices (think iPhone) and software (anything Web 2.0) to vendors. The impulse to do so stems from the headaches consumers encounter with technology. But locking down devices and software inhibits innovative tinkering. Vendors can control, for example, whether you may modify their code or use someone else's—and change their minds anytime. Plus, they know everything you do and can pass that information to law enforcement on demand.

Zittrain (a moderator at CIO events), says solutions include ensuring data portability, privacy protections and new legal frameworks to protect third-party developers. But will we insist on them? That's an open question. *–E.V.*

Lead By Example

50 Ways Great Leaders Inspire Results

By John Baldoni

Amacom, 2008, $21.95

Whether great leaders are born or made, author and leadership consultant John Baldoni, (a frequent CIO contributor) outlines how they can inspire results. Packaged as quick management lessons, this is less a textbook on leadership skills than a source of inspiration that could offer you a tip about relating to staff or suggest ways you might drive innovation.

At its core, the book focuses on the importance of building up individuals, improving communication skills, standing up to adversity and putting others before yourself. It suggests that the better you become at "acting the part," the more it becomes part of you.

–Christine Celli

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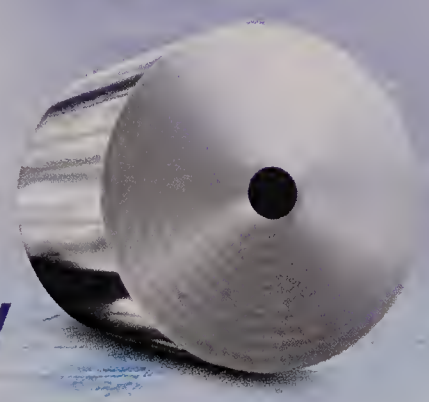

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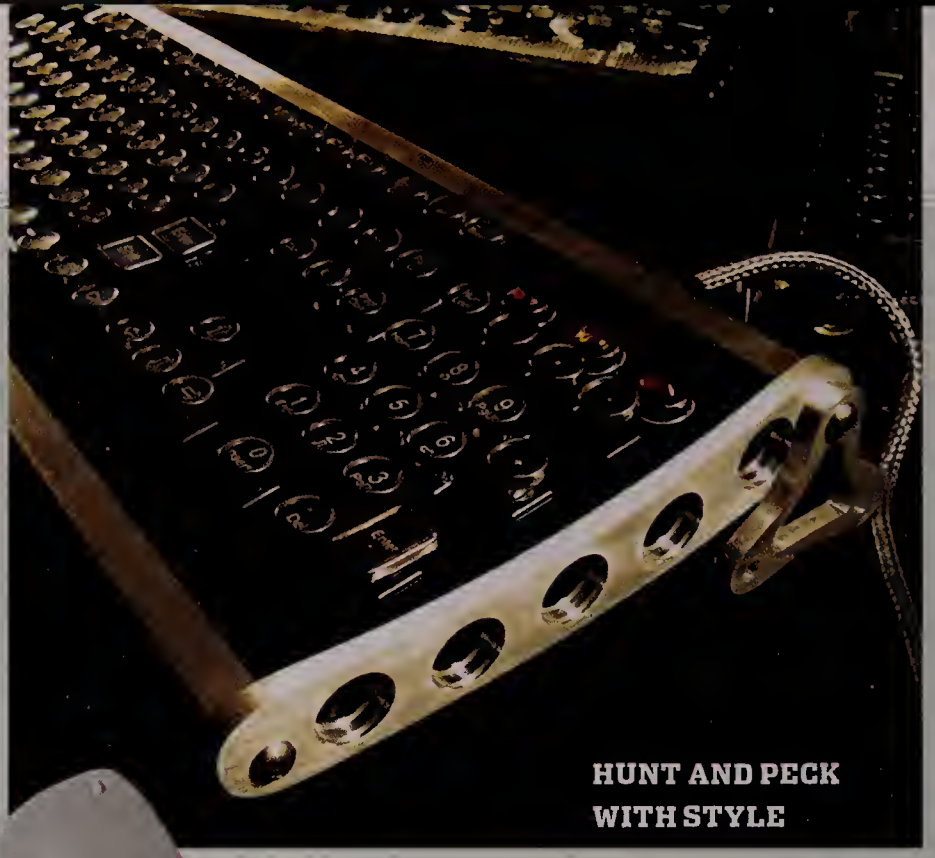

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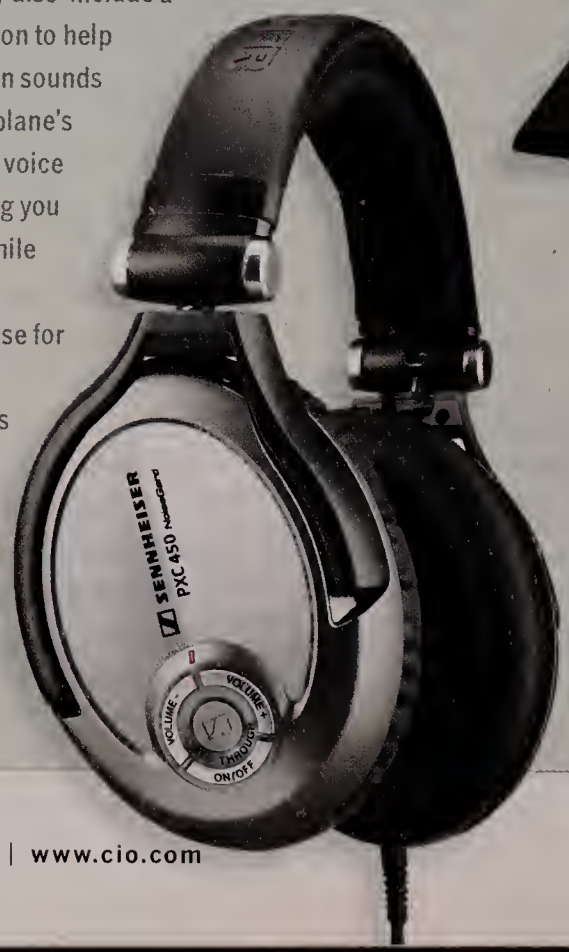

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–Kristin Burnham

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BY **CHRIS KANARACUS**

Data Modeler

job description: If database administrators are jet pilots, then data modelers are aerospace engineers, performing the initial design work that enables production systems and applications to use data and drive business processes, according to David Van De Voort, principal human capital consultant with Mercer, a consulting firm. "They are in the business of creating data designs, defining relationships between data fields," he says. "They're doing the blueprint for a design which ultimately will get physically built on a machine."

why you need one: A business's data is one of its most important assets but it must be modeled efficiently to have great value. This is ever more important as corporate IT environments have become both more complex and more crucial to a business' success, says Taz Stephens, a regional managing director at IT services provider Technisource. "The importance of having an effective data modeling group has become increasingly important not only to the technology group but the business," he says. "To ensure that the applications and systems run as effectively as they can, you really need to have a good data modeler."

salary range
$90,000 to $130,000

desired skills: At least five years of experience, familiarity with modeling tools such as ERWin. There is high demand for skills around data warehousing, business intelligence and ERP initiatives. Large companies want modelers with experience on more than one database. And match the modeler to the data environment. For example, companies with complex transactional systems running a terabyte or more of data want someone who has been in that world.

how to find one: Try job boards, word of mouth and other traditional means. However, the supply of candidates is tight. "There are user groups you really need to network through. This is not a post-and-pray kind of environment," said Jim Lanzalotto, vice president of strategy and marketing at talent and outsourcing firm Yoh.

what to look for: Data modelers need strong social skills since they interact with DBAs, developers, infrastructure resources and business users. Look for proactive thinking about how to use data in a way that aids the business. Candidates should have public speaking and presentation skills.

elimination round: There is a sure-fire way to weed out the phonies, according to Stephens. If a data modeler can't demonstrate what they can do with an established modeling tool, "then they're a pretender," he says. Candidates who pass that test should then face questions meant to reveal how they might handle problem solving in your company's environment.

growing your own: Data modelers can be grown in-house, according to Lanzalotto. "Use a farm system," he says. "Cross-pollinate people across projects to get them the exposure they need." But it would be a mistake to assume, for example, that a DBA could be a data modeler, says Van De Voort. "There are different character traits and competencies," he says. However, "it's a good sign [when] someone wants to give it a go. It's inherent in data modeling that these are people who are investigative and inquisitive in their temperament."

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ESSENTIAL

FROM INCEPTION TO IMPLEMENTATION—I.T. THAT MATTERS

technology

Ready, Set, Slow

BY CINDY WAXER

To get all the benefits of virtualized storage, make sure you've accounted for possible interoperability and infrastructure headaches

STORAGE | Babu Kudaravalli, senior director of IT operations at SXC Health Solutions, knows about the havoc an acquisition can wreak on a company's storage infrastructure. While overseeing National Medical Health Card Systems' (NHMC) IT department, he watched the pharmacy benefits manager grow nearly 40 percent per year, primarily through acquisitions. The result was a mishmash of more than 60 servers that were functioning at 90 percent utilization, impacting performance and creating a constant challenge for storage and system administrators, he recalls.

Fortunately, that had changed by the time SXC acquired NMHC last February. Gone was the hodgepodge of arrays and, in its place, a high-capacity, easy-to-manage storage infrastructure made possible through storage virtualization. "SXC was very impressed," says Kudaravalli, adding that SXC plans to preserve NMHC's storage environment.

But accolades aren't the only reason companies are turning to storage virtualization. Cutting costs, easing management headaches, simplifying data migrations across multiple tiers—these are just a few of the factors pushing them into the arms of vendors including Hewlett-Packard, EMC, Symantec and DataCore Software. A study by research firm TheInfoPro reveals that 35 percent of Fortune 1000 storage organizations are using the technology and plan to expand their investment during the next two years.

ILLUSTRATION BY ANASTASIA VASILAKIS

Not unlike server virtualization, which simplifies the management of disparate server hardware and operating system platforms, storage virtualization masks the complexities of heterogeneous storage arrays by aggregating them into a centralized structure. And it's earning plenty of fans. But with all the hype surrounding this technology, many CIOs fail to consider the hurdles—from interoperability glitches to deployment snafus—that can greatly impact storage virtualization success.

> "In the course of putting [storage] into one consolidated pool, companies risk new problems, like performance issues." –Greg Schulz, founder, StorageIO Group

"In the course of putting [multiple storage devices and arrays] into one consolidated pool, companies risk introducing new problems, like performance issues," warns Greg Schulz, founder of consulting firm StorageIO Group.

Far from Plug-and-Play

Kudaravalli agrees. Today's NMHC storage environment consists of two HP StorageWorks XP24000 Disk Arrays, which supply enterprise-class capacity to applications from a pool of virtualized storage. And two HP StorageWorks Enterprise Virtual Arrays support near-mission-critical applications requiring high availability and midrange capacity. The result is 55 terabytes of virtualized storage. But, Kudaravalli admits that "it took a long while to get there."

For a company to make the most of storage virtualization, a solution must be able to accommodate existing storage hardware, as well as satisfy the requirements of future storage systems. In NMHC's case, Kudaravalli needed a solution that would be compatible with factors including the company's existing servers, host bus adapters, fiber cards, fiber switches, operating systems and multiple business applications.

For this reason, NMHC spent nearly nine months testing evaluation copies of HP's technology, and decided to limit itself to a single vendor. By doing so, Kudaravalli hoped to reduce the interoperability headaches that can arise from deploying disparate solutions from competing vendors.

Schulz of StorageIO recommends requesting a compatibility matrix from vendors that outlines not only the products each supports but the versions and configurations, too. While a storage virtualization solution may accommodate a competing vendor's hardware, interoperability issues may prevent it from taking full advantage of a device's functionality.

A Multistep Process

Another obstacle that can stand in the way of a high-functioning, virtualized environment is a botched deployment. Because implementation errors can result in data loss and reduced service, experts warn that deploying virtualization across an entire enterprise in one fell swoop can easily spell disaster.

Rather than risk "putting its business in jeopardy," Kudaravalli says NMHC adopted a piecemeal approach to implementation that spanned more than a year and involved the use of test servers for development, quality assurance and production trials. As a result, Kudaravalli was able to standardize the deployment process, avoid having to hire top-dollar consultants, reduce the complexity of the overall project and gain time to properly troubleshoot unanticipated deployment glitches.

Time certainly wasn't on the side of Gerry McCartney, CIO of Purdue University, in April of 2007. But he knew that wresting control of the institution's complex and overloaded storage environment called for a carefully plotted procedure. Purdue selected EMC's Invista network-based storage virtualization solution. But McCartney first made certain Purdue's existing storage-area network was robust enough for virtualization, ensured adequate switch port capacity, certified connected hosts, as well as updated firmware and operating system patches.

"It was a lot of work but it was the best method to preserve the integrity of our operating environment as we proceeded," says McCartney.

McCartney also opted to deploy the virtualized environment "host by host," to allow system administrators to become familiar with it and make certain they did not run into performance issues. This slow-and-steady approach also afforded Purdue University's IT team the time needed to determine which systems could be virtualized in place, and which required scheduled migrations to avoid disruptions.

However, not all experts agree that a slow deployment is a smart move. John Sloan, a senior research analyst with Info-Tech Research Group, cautions that "a graduated approach" delays "reaping the benefits of a streamlined infrastructure." All the more reason for companies to test the waters before pooling their storage resources via virtualization.

Cindy Waxer is a freelance writer based in Toronto. To comment on this story, go to *www.cio.com/article/461925*.

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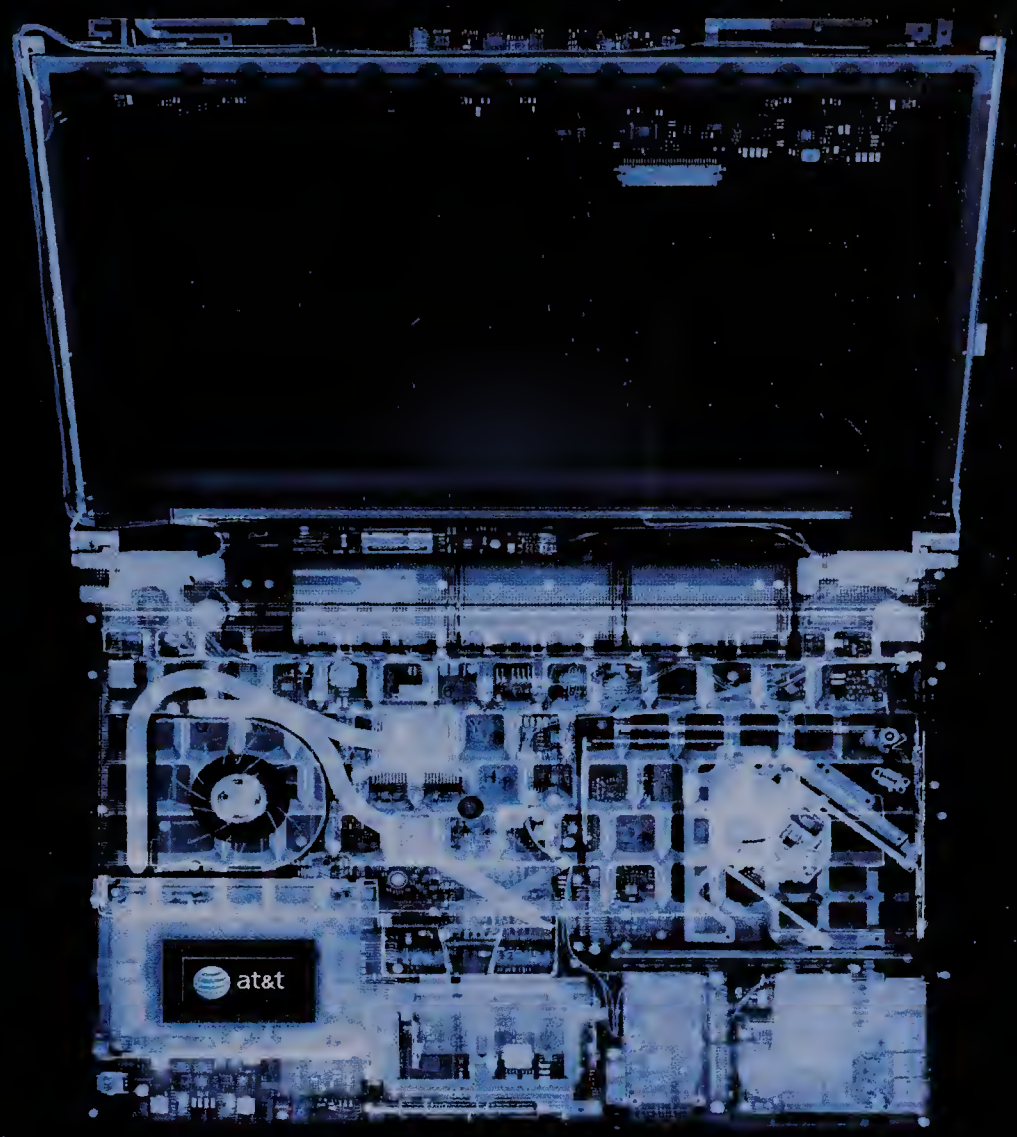

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Windows 7 and Your Next OS Upgrade

Skipping Vista? Some reasons to rethink that decision.

BY SHANE O'NEILL

OPERATING SYSTEMS | As organizations weigh what to do with Windows XP upgrades, the thought of leapfrogging the much-maligned Vista often comes to mind. But be warned, says a recent report from Gartner: Migrating directly from XP to the next release, Windows 7, could be a dicey proposition.

The report by analyst Michael Silver states that most organizations should not skip Vista entirely and should install Vista on new PCs as they are deployed. The main reason: Independent software vendors (ISVs) don't support old versions of Windows long enough or new versions of Windows soon enough. Also, Silver suggests, Windows 7 is not likely not to arrive on time.

"The next version of Windows may be delivered later than Microsoft says and be just as unsuitable for immediate deployment," as earlier versions, writes Silver. Organizations that skipped Windows 98, Windows 2000 and Windows XP often had ISV support issues, as well as difficult and rushed migrations. Those who skip Vista "are likely to have the same problems," he added in an interview.

The only companies that may be able to skip Vista entirely are those doing forklift migrations—updating hardware and OS all at once—and those that don't plan on deploying Windows 7 until mid-2011, Silver says. This would be 18 months after Microsoft's stated Windows 7 ship date, the estimated time that Windows 7 will be mature and stable enough to deploy, in Gartner's view.

> According to Gartner, the companies that may be able to skip Vista are those that are updating their hardware and operating systems all at once.

Delay may also cost you. Businesses without Software Assurance (Microsoft's maintenance and support service) must budget to buy software license upgrades. Gartner predicts that Windows 7 will include downgrade rights to Windows Vista only. If this is the case, Windows XP PCs purchased in 2010, 2011 and 2012 will be bought with Windows Vista licenses so that XP can run until a Windows 7 deployment. As a result, organizations won't have Windows 7 licenses when it is time to deploy and will have to buy upgrades.

Despite the potential drawbacks, many CIOs plan to stay with XP in the foreseeable future, given the investment required. "It means also upgrading to Office and possibly Exchange and now Windows Server—there's too much cost, time and energy," says Stephen Laughlin, director of IT at the Academy of Television Arts and Sciences.

Roger Kay, founder and president of research firm Endpoint Technologies, says that Windows 7 may be an opportunity for Microsoft to try to sweep the bad vibes of Vista under the rug.

For XP users frustrated by Vista, Windows 7 may appear like a fresh new start, even if underneath it is just an enhanced version of Vista, Kay says.

"Vista was such a giant leap from XP, and for many it was disappointing and adoption has been slow," Kay says. "The leap from XP to 7 will be harder in some respects, so it is key for Microsoft to preserve what was good in Vista and fix what didn't work." CIO

Reach Senior Writer Shane O'Neill at *soneill@cio.com*. To comment on this story and to read more about Windows 7, go to *www.cio.com/article/461926*.

ADVERTISEMENT

Research reveals real mobile security concerns

Lost, Stolen Laptops Have CIOs Feeling Insecure

market pulse

How confident are you that laptops in your organization are secure? IDG Research Services recently posed this question and others related to mobile security to CIOs and IT leaders around the country—and found a startling gap between what these executives deem to be the greatest threats to company laptops and their ability to combat them.

One in five IT leaders say that laptop users in their organization have been responsible for costly data breaches—intentional or accidental—in the past year, according to the study. Part of the problem stems from the loss or theft of the devices, which had occurred at more than 70 percent of the companies in the survey.

Yet CIOs understand the real costs of failed laptop security. "What's at stake is reputation as much as anything," says Phil Skinner, deputy CIO of Ohio University Medical Center. Eighty percent of the IT leaders surveyed agree, placing loss of reputation at the top of their laptop security worries, with the associated legal consequences of nearly equal concern.

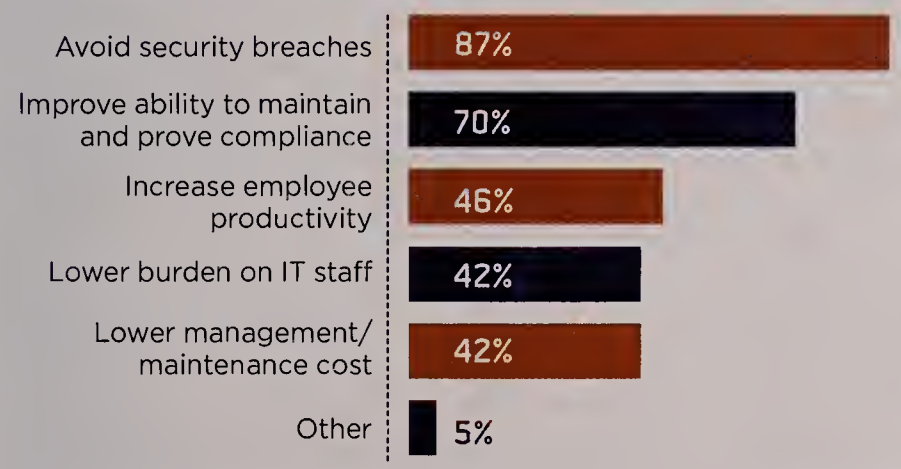
The study reveals that although CIOs are comfortable with established technologies such as firewalls and anti-virus, most lose confidence in their laptop security once the devices leave the corporate LAN. While mobile workers operate outside the corporate firewall, many organizations are unable to prevent them from sending sensitive information to unauthorized parties, storing proprietary data on personal flash drives, and/or using unencrypted Wi-Fi hotspots.

What CIOs Say Mobile Users Have Done With Laptops/Mobile Devices

Lost laptop or had a laptop stolen	73%
Surf inappropriate websites	61%
Access the Internet via unencrypted public access points	59%
Open e-mails that contain viruses	56%
Copy confidential files to USB thumb drive	52%
Send confidential information to unauthorized third parties	49%
Introduce a virus or other malware into the corporate LAN	45%
Disable firewalls and anti-virus packages	29%

Source: IDG Research Services, 2008

Top Benefits of Maintaining Security and Compliance of Laptops and Mobile Devices



Source: IDG Research Services, 2008

For instance, 60 percent of IT leaders say that their mobile workers have used unencrypted wireless access points in the past year. This sort of incident can happen because standard solution sets provide minimal flexibility to control wireless settings on laptops.

"You need to have a lot of contextual intelligence, including what access points mobile workers are connecting to," says Jim Szafranski, vice president of marketing and product management for Fiberlink Communications, a provider of software and services to support mobile workers and secure laptops.

IT organizations have trouble tracking laptop policies and compliance. Surprisingly, half of the companies surveyed say they are unable to track the compliance and policies of corporate laptops—even though 87 percent believe this capability is vital to security. With economic interests and customer relationships at stake, IT leaders are seeking centralized laptop management solutions before a security breach takes place.

To read the full results of this research study, and discover the benefits of centralized laptop management solutions, download the white paper "Laptop Security: Where Do CIOs See Weaknesses?" at www.cio.com/whitepapers/security

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DAVID HOWARD-JONES

Careful With That Axe

Cutting IT costs can only take you so far. You also need to invest in talent management.

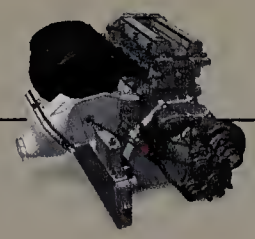
The recent economic storm that has battered economies worldwide has sent companies scurrying to take cover. Many have quickly turned to IT cost-cutting plans in an effort to staunch the flow of red ink. However, attempts to drive down technology costs may be taking some firms in the wrong direction. The headlong rush to reduce IT costs in the short term can compromise many companies' ability to improve productivity and profitability in the longer term. We believe that by focusing on talent management, CIOs can deliver higher value results at lower total cost. The immediate challenge for senior IT executives is to redirect IT investment in order to cultivate, reward and retain the most critical IT talent—the "IT stars."

Technology has long been heralded as a key to cost reduction and it is often assumed that a greater use of IT will create a kind of virtuous circle of continuing cost reductions. In fact, the search for ways to commoditize and cut IT costs actively discourages needed investment in talent management structures that could help the CIO retain highly skilled staff at the critical interface between IT and the business lines.

For that reason, companies must learn to differentiate between IT activities that are truly "commoditizable" and where costs can be safely cut (such as infrastructure, hardware and systems standards), and the specialized processes that create unique value for the firm (such as risk management, new channel or new product development, and customer analytics and predictive modeling).

Any cost savings from cuts in commodity activities should be candidates for reinvestment in "specialist" areas where success depends on IT stars gaining a deep understanding of how businesses create value.

This two-pronged approach to IT using both talent and cost management in equal measure is important. Many complex technology projects are never satisfactorily completed and, far from cutting costs, become a drag on profitability. Having the right team in place



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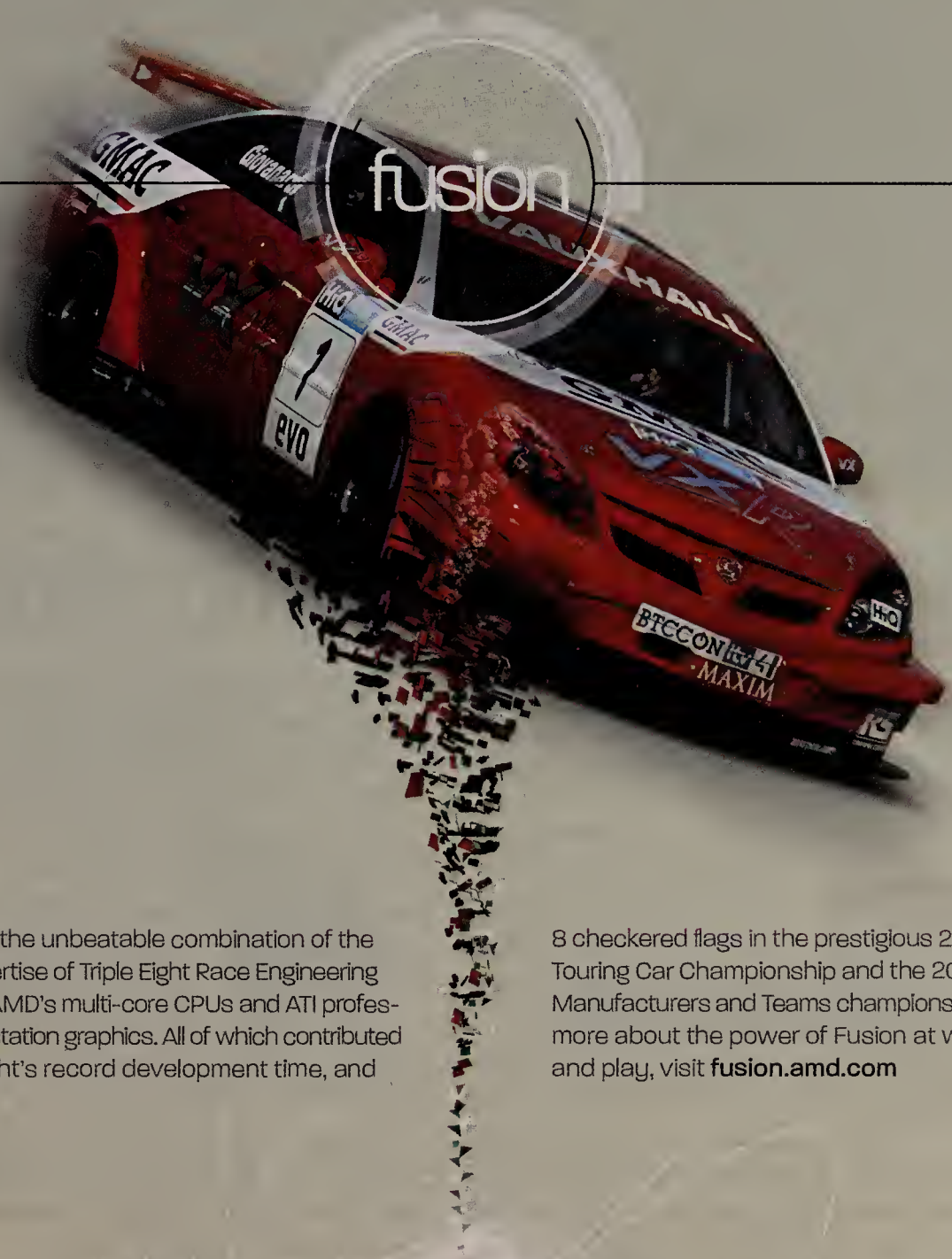

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can help a project avoid this fate. IT success depends on people, not technology.

Put the Spotlight on Talent

Haphazard cost cutting raises the danger of underinvestment and losing ground—and good people—to competitors.

Haphazard cost cutting raises the danger of underinvestment and losing ground—and good people—to competitors. (Read "Doing Layoffs Right," Page 54.) To mitigate those risks, IT executives should concentrate on two talent-related imperatives:

1. Recognize that deepening business knowledge in selected IT teams is critical to success. This will be especially true in any area where there is a 'build versus buy' decision, because the need to make this choice signals that customization and business knowledge will be decisive in determining the project's success. CIOs should put in place opportunities for staff to increase their knowledge of the business: internal IT business training courses, scholarship funding for professional qualifications in their field of business, mentoring for rising stars and cross-training within the business when appropriate.

2. Build the right talent mix. The right mixture often turns out to be fewer, more skilled and higher paid local staff, combined with lower-cost offshore workers who are also highly skilled. This shift can deliver cost savings and a more concentrated investment in technology talent. Too often, firms have focused on the shift to offshoring without commensurate enhancement of onshore roles throughout the organization.

Rethink Your Staffing Approach

CIOs should abandon the idea of taking a single approach to IT talent. Hiring workers who are capable of dealing with the complex IT and business interface is expensive. Instead, IT leaders must pursue a differentiated approach.

Start by identifying tasks where traditional cost cutting, outsourcing and offshoring are appropriate. Examine projects and processes where development requirements are closely specified and fixed, and objectives and standards are clearly established. These could include back-office functions, accounting systems, design and general processing support. By identifying those areas where you can shift resources, you can focus on investing IT talent in business areas with new or rapidly evolving products or methodologies, or where business revenues are high.

Tips for Managing Talent

For more about talent management, read **EMPLOYEES LEAVING? HERE'S WHY AND WHAT YOU CAN DO ABOUT IT** at **www.cio.com/article/456423**.

CIO.com

Interestingly, a differentiated approach can sometimes deliver net cost savings, even in areas where business practices and products are rapidly evolving and more experienced IT resources are required to meet demanding business schedules. For example, we recently estimated that the credit trading business of one global bank could employ more skilled and higher-paid IT workers and still realize savings in excess of $300 million dollars over the next five years. The math works by shifting the staffing mix, offshoring some key subsidiary tasks, reducing the total head count and then paying more across the board to staff in the future: both offshore and onshore resources will need higher skills sets to manage the greater expectations of the firm.

Amazon, Ameritrade and Google are great examples of companies whose IT talent mix is skewed toward the specialist end. Of course, the choice is made easy for them since their business models depend on IT excellence. However, it is worth remembering that the question is one of degree: While many IT platforms today can be purchased as commodities, their implementation always requires such a high degree of customization that a significant level of investment in talent to drive this customization is essential.

Getting the right level of business end-user know-how into the IT implementation teams is critical for the success of these projects. There is no shortage of project failures and horror stories in software implementation. Yet project risk in many could have been significantly reduced by enhanced investment in the right business expertise on the IT project team.

Big Questions for IT Leaders

Talent management, then, not cost reduction, should be the number-one priority for technology professionals.

For CIOs, this means taking a fresh look at the mix of talent required, how to attract top staff, and how to keep them busy and learning at the interface between business and IT.

When a firm learns to differentiate its requirements and skew its talent management in the right direction, cost savings can accrue at the same time that success rates improve.

Big questions confront IT leaders in these turbulent times. Will lessons learned be more widely applied as the spotlight turns to cost reductions and performance improvement in a range of IT-intensive industries? Or will global economic worries prompt executives to search for ways to cut back and put IT once more on the chopping block? We think fortune will favor those brave enough to invest in the talent needed to lead. CIO

David Howard-Jones is a partner at consulting firm Oliver Wyman. He is a member of the firm's Finance & Risk and Strategic IT & Operations practices. To comment, go to *www.cio.com/article/461922*.

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Martha Heller | CAREER STRATEGIST

Running Your Own Technology Company

CIOs-turned-CEOs discuss how to make the transition from one role to the other

How many times have you thought, after listening to an awful technology vendor presentation or watching your software partner miss deadline after deadline, "If I ran that company, things would be different."

It may be time to act on that impulse—if you have the right background and a good deal of drive. CIOs who want to run the show as CEO are finding that technology companies are a natural fit. As longtime customers of IT vendors, they know the products and the development process, they know the business—from the customer view—and they've sat through enough presentations to know how (or how not) to sell. And if they've been networking with their peers, they should have a good customer target list as well.

These experiences are your price of entry to running a technology company. But as three CIOs who followed this path explain below, you must also decide that this is your career goal and set in place a strategy to make it happen.

Get Cross-Functional Experience

"In 1985, I had an epiphany," says Mike Kistner, CEO of Pegasus Solutions, a provider of reservation and distribution technology, and financial and marketing services in the hospitality industry. "I was a senior developer at Super 8 Motels working on a general ledger program, and I realized that the date fields had two digits. I thought, 'this will be a nightmare in 2000' and I vowed to get out of IT before Y2K."

This epiphany led to another one for Kistner—that the pursuit of management roles outside of IT could be a critical step on the road to CEO, if he managed his career correctly. Kistner began to build relationships that would pave the way into new areas of the business. As Super 8 was acquired by HFS and then by Cendant, Kistner kept a hand in IT but he also accrued cross-functional leader-

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ship experience. At different times, he held responsibility for IT, reservations, guest services, convention planning and other operational areas.

During his tenure from 2000 to 2005 at Best Western, he led IT but picked up distribution as well. In 2005, he joined Pegasus Solutions as VP of operations and technology, and then became CEO in June 2008.

"Become a student of the skill sets required to run a business. As CIO, you have access to a wide variety of leaders. Interact with them to understand where the gaps are in your own skills."

–SEAN O'NEILL, CEO, NEWMARKET INTERNATIONAL

His advice: "If your goal is to run a company, you need to get out of IT and into other parts of the business. My old boss, David McNicholas [former CIO of Avis] used to say, 'To a man with a hammer, everything looks like a nail.' You need to put down the IT hammer once in a while and pick up tools from other parts of the business."

Fill in Your Skills Gaps

Sean O'Neill is CEO of Newmarket International, a sales and catering solutions provider for the hospitality industry. He was the CIO of ITT Sheraton when he realized that he wanted to broaden his aspirations. "I was creating a ceiling for myself as CIO. I wanted to have broader influence over decision making and decided to pursue a different path."

During interviews with his next employer, travel vendor Grand Circle, O'Neill talked about "how we had transformed information technology at ITT Sheraton into a business function that was integrated with the business. They knew that while I was coming to them as a CIO, my motivation was to be on the business side."

Grand Circle hired O'Neill as a CIO with the understanding that he would soon add EVP of operations to his role. Several years later, in 2001, he joined Newmarket as CEO. "I chose a technology provider strategically," says O'Neill. "I wanted to stay close to what I knew best. I had the experience of being a consumer of these products and could get up to speed very quickly."

Join the Conversation

Respond to **MARTHA HELLER**'s latest online column at **www.cio.com/author/41283**.

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It's a...

Bill Courtright,
Executive Director/Parallel Data Lab/Carnegie Mellon

Greg Ganger,
Director/Parallel Data Lab/Carnegie Mellon
Professor of Electrical and Computer Engineering/Carnegie Mellon

His advice: "Become a student of the skill sets required to run a business," says O'Neill. "As CIO, you have access to a wide variety of leaders both inside your company and out. Interact with those people and start to understand where the gaps are in your own skills."

He found, for example, that while he had a good grasp of functions like accounting, human resources and sales, he needed a better understanding of the financials. "I would risk looking like someone who doesn't get it by raising my hand in a meeting and asking, 'Why did we use this debt structure?'" he says. "I would anticipate my next meeting with our CFO and prepare questions."

Engage Your Customers

In 2006, Trent Gavazzi was a business-line CIO with the capital markets division of the Bank of Montreal in the U.S. He was implementing risk and compliance systems and realized that he had no way of providing executives with a way to monitor systems and be alerted to urgent events. Gavazzi started looking in the marketplace for what he needed but found that there was no solution that fit his problem.

He started floating the idea of a risk-monitoring system to people in his professional networks and received enough enthusiasm that in 2008 he launched QuickWaters Software, a consolidated risk management alert software provider. Having come from a family of entrepreneurs, Gavazzi knew he would wind up launching a business at some point, but found that his CIO background was critical for this venture.

"My CIO background helped me reduce the barriers to entry," says Gavazzi. "I knew all of the hot buttons of a large financial services organization and what slows down projects. My years of installing systems taught me to reduce the complexity of the product and do the right documentation up front. As a CIO-turned-CEO, you have to learn from the way you tortured your vendors so that you don't make the same mistakes they made," he says.

His advice: "Running your own software company is not for everybody. You have got to be able to engage your network, to let people know what you're doing, and to be passionate and believable and creative about how you get attention. When you are the CIO, people are calling you. When you're running a software company, you are the one making the calls." CIO

Martha Heller is the managing director of the IT Leadership Practice at ZRG, an executive recruiting firm that is based in Boston. You can reach her at *mheller@zrgroup.com*.

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Maintaining office space is expensive. Here's how one company made telecommuting work for everyone.

BY MERIDITH LEVINSON

Reader ROI

- Why telecommuting saves money and improves productivity
- Technology needed for large-scale telecommuting
- Ways to ensure that remote employees communicate with managers and each other

RICK BOYD USED TO SPEND $500 A MONTH ON GAS AND TOLLS COMMUTING 48 miles a day between his home in Westchester County, N.Y., and his office in Hasbrouck Heights, N.J. Now Boyd doesn't commute any more because his company, Chorus, which provides clinical, practice management and financial software for health care providers, has gone virtual.

Chorus, where Boyd is CIO, closed 15,000 square feet of office space—its Hasbrouck Heights headquarters and another office outside of Houston—during the summer. Now all of the company's 35 employees and full-time consultants work at home. And that works for Chorus and its customers.

PHOTO BY STEPHEN WEBSTER

Chorus **CIO Rick Boyd** holds a daily conference call with his team and uses instant messaging to keep tabs on his staff throughout the day.

Becoming a virtual company is saving Chorus $400,000 a year and spares employees the hassle and cost of commuting. Breaking leases and telecom contracts is costing the company money, but the long-term savings far outweigh those short-term costs without negatively affecting customers, says CEO A.J. Schreiber. "We wouldn't have done this if it would have had a negative impact on our ability to serve customers," he says.

Although Chorus is a small company, its experience holds lessons for other organizations considering large-scale telecommuting. More companies are warming up to the idea, says Cali Williams Yost, president and founder of consultancy Work+Life Fit. Work-at-home options for employees provide companies with flexibility, as well as bottom-line savings, even if they maintain a physical location somewhere.

"It helps you recruit and retain talent and manage resources like real estate," says Yost. There are more and more companies realizing you don't need to be in the same place every minute of every day."

In a survey of 212 professionals by CompTIA, a technology industry trade association, 67 percent of respondents said they were more productive when they worked at home and 59 percent reported cost savings.

That's not to say there aren't still challenges to making telecommuting work. At Chorus, executives had to establish work policies designed to maintain employee productivity and customer service levels. The company had to deploy technology to make workloads more transparent for managers, as well as to transfer knowledge among staff, provide training and enable them to collaborate. The

PHOTO BY STEVEN VOTE

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IT department needed to devise efficient ways to provide remote tech support.

But so far, none of the hurdles the company has encountered at this point have proven insurmountable, according to Boyd and his colleagues. Here's what they've learned.

Deploy the Right Technology

Marvin Luz, vice president of client services, had serious concerns about Chorus becoming a virtual company. "There's something to be said for the security blanket of having your coworkers right next to you if you have questions."

Foremost on his mind was Chorus's ability to meet its customers' needs. His group interacts directly with users of the company's software, handling their questions, scheduling upgrades and working with the infrastructure group to resolve technical issues. The company had to figure out how customer support calls would be routed to agents at their homes and in such a way that clients wouldn't know that the agent to whom they were speaking was working from home.

Chorus already had in place much of the telecommunications infrastructure it would need, including a firewall and VPN. In 2007, Boyd had deployed a voice-over-IP (VoIP) solution from Cisco that included Cisco's IP Communicator (client software for making and receiving phone calls) and a high-end router in the company's New Jersey data center (the data center, where Boyd consolidated corporate systems, remains open, with staff visiting as needed). The company also had a Windows Active Directory server for managing employee identities and system access; Boyd added a second in early 2008.

Boyd and his staff deployed the IP Communicators on every employee's laptop. The first few deployments were difficult, Boyd says, primarily because his team wasn't familiar with the technology. Once everyone became more comfortable with it, deployments went more smoothly. (Dynamic Strategies, a New Jersey–based VoIP services provider, helped.) It took Chorus about three weeks to get all the IP Communicators on everyone's computers, he says.

To ensure the quality of the phone connections, Boyd and his staff had to give some employees higher-end routers than typical home routers, which dedicate a more limited amount of bandwidth to employees' Internet phones, says Boyd.

Most employees already had corporate-issued cell phones, but Chorus put together a policy and expense guidelines so that everyone could get BlackBerrys, Windows Mobile–compatible devices or a 3G iPhone to use as a back up if their IP Communicator goes down.

In addition, Boyd and team created what he calls "hunt" groups for each of his IT support units: customer support, infrastructure, application development and business analysts. For example, if customer support needs infrastructure help to assist a client, the customer support employee dials the extension for the infrastructure team's hunt group, the number rings to the entire group and whoever is available can answer the call.

Before employees began working from home, Chorus tested the telecommuting set-up with Customer Support Account Manager Jairis Galvez. She worked at home two Fridays in a row, and all of the vice presidents called into

HOW CHORUS KEEPS TELECOMMUTERS IN THE LOOP

Daily meetings and reports set the business agenda

Since Chorus employees began telecommuting in June 2008, the provider of technology products and services for community health centers has established a series of meetings and communications designed to align employees around top business priorities. These include:

1 **Daily morning executive team meetings.** CEO A.J. Schreiber and company vice presidents have a conference call every day to discuss top priorities. As a team, they affirm what needs to be done that day, the following day, the next week and longer term.

2 **Daily morning reports.** This report goes out to senior and middle management every day and compiles all of the internal and client projects that each team is working on. The report gives nonexecutive staff visibility into high- and lower-priority activity inside the company, and let's each group see how their work fits into each project.

3 **Daily infrastructure team call.** CIO Rick Boyd and his database administrators, application support team and IT infrastructure support team review the items that came up during the morning executive team meeting to ensure that everyone in IT has what they need to meet the daily and weekly objectives. **–M.L.**

From: I need training to install this

To: My intern installed this

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her queue to make sure they could hear her, that she could hear them and that there wasn't static on the line.

Another technical issue Chorus's IT department had to address was how far-flung employees would make internal phone calls. When Chorus maintained two offices, employees in Texas and New Jersey could dial four-digit phone numbers to reach each other across the country. The existing firewall didn't support a VPN-to-VPN data transfer, so although employees could dial a colleague's four-digit number and the call would connect, neither party could hear the other. The solution: Upgrade the firewall, which Boyd did in June.

Chorus **CEO A.J Schreiber**'s decision to close the company's offices in Texas and New Jersey—and have employees work from home—is saving $400,000 dollars a year.

Develop New Work Policies

Chorus developed work-at-home policies for telecommuters designed to maintain their productivity and quality of service.

One aspect of the policy pertains to employees' work environments. Every employee needs to have a defined space that they can use for work—ideally a room

PHOTO BY STEVEN VOII

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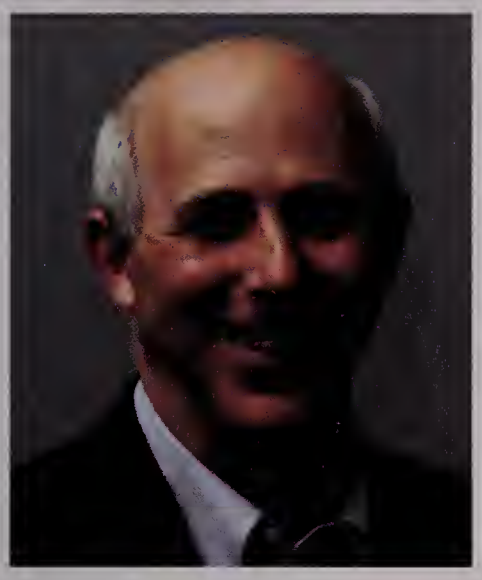

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Abnous, who joined EMC Documentum in 1991 as a founding architect, has more than 25 years of experience in leading and architecting software products.

How can you tap the global economy and workforce for greater agility? According to Razmik Abnous, vice president and chief technology officer for EMC's Content Management and Archiving Division, you need access to the best people and information—whether they can be found inside or outside your organization. And it's the enterprise content management (ECM) platform that will help you attain greater agility. Read on to learn more.

How is the global economy driving today's ECM strategies?

Most companies are finding that their strategic partners and customers are a key part of their innovation ecosystem and product delivery system. So they need to find ways to collaborate, share information and orchestrate business activity to leverage the global economy. That's what ECM systems are designed to do—which is why they're becoming a competitive edge.

What impact can effective ECM strategies have on agility?

The right ECM strategy leverages this new model of the extended workforce, enabling companies to access, share and collaborate within the organization and across their partner and customer landscape while at the same time protecting intellectual property. And, within that construct, companies can orchestrate repeatable activities through a workflow engine that brings partners into business processes. Finally, ECM can deliver on the high-performance demands for global access, so partners can add more value.

How are Web 2.0 technologies affecting that impact?

There is certainly a lot of emphasis on Web 2.0 today. Initially, its impact has been on consumers, but now there's influence on enterprises, too. Today, businesses want a convergence of Web 2.0 technologies and traditional ECM—integrating social computing with things like content sharing, collaboration, discovery and compliance. And this convergence is enabling more-effective sharing based on knowledge from an expanded community of experts.

Can you offer some examples?

Consider a typical news agency where journalists are submitting articles through document management systems. Articles are tagged by topic—such as Web 2.0 social tagging—and pushed to the ECM platform. Similarly, a life sciences company uses a combination of Web 2.0 crowd sourcing and content management to connect experts inside and outside the company, thus streamlining its product lifecycle. And a healthcare provider uses repeatable, compliant processes to work with external parties for case resolution.

> "Companies that provide products or services can leverage ECM to improve their performance and productivity."

What is the potential applicability with the highest ROI?

Companies that provide products or services can leverage ECM to improve their performance and productivity. It's about tapping the best knowledge and expertise in-house but also using ECM capabilities to connect global workforces around the clock and in real time while still protecting intellectual property. As a result, these companies are able to streamline operations, enhance processes and focus on core competencies—so they can get to the market faster with in-demand products.

What is the fundamental value of current and future generations of ECM solutions?

Today's ECM solutions are all about connecting people, processes and information inside the organization. But the demand is to go beyond organizational boundaries and bring in the global ecosystem. By crossing such boundaries, companies are able to engage the best people and the best information to make the global ecosystem part of the corporate value chain. This is the future of ECM.

FOR MORE INFORMATION:
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AFRAID OF TELECOMMUTERS?

That's only because you don't know the business case

Companies that don't embrace telecommuting and other flexible work arrangements are making a strategic mistake, says Karol Rose, an author and CMO of FlexPaths, which provides a portal for managing workplace flexibility. We asked Rose why so many employers remain resistant and how to change their minds.

CIO: There's a lot of talk about workplace flexibility these days, but is there an equal amount of action from employers?
KAROL ROSE: It's often bubbled up because a very desired employee says, "I've had it. I can't work this way anymore." But these companies aren't using flexibility as a strategic tool to achieve business results. They've generally approached flexibility as a one-off situation to accommodate individual employees. [And] they've put in place formal arrangements that require some kind of written agreement between manager and employee.

What's wrong with that?
They may have created a way to manage flexibility that is inflexible. It's also not working as well as it could because it's reactive.

Why aren't employers offering their employees more?
One reason is that some companies don't really understand the value. [It] should meet personal needs, [but] if employees don't speak about flexibility in a way that makes sense for the business, they're not going to get it.

If a CIO wants to lead the discussion about workplace flexibility at her company, how can she get started?
Find out what your company already does. Check out the competition. Look for the business case.

Next, develop an ROI. A midcap company with 14,000 employees would eliminate $3.5 million in facilities costs and gain 17,000 carbon credits if five percent of its employees telecommuted. And that doesn't even factor in the increase in discretionary work time.
Third, make a plan. Look for influencers in the organization who might join in planning and presenting your plan to key decision makers.

Next, pilot the plan. You can even pilot in your own organization. It's a great way to work out the kinks and learn what will work best.

Finally, communicate. Share best practices, challenges, and ask everyone for input. Don't forget to go back to key influencers and decision makers not just with quantitative data, but also qualitative data (stories) which are often even more compelling for leaders to hear.
Read more from this interview at www.cio.com/article/384064.

–M.L.

in their house or apartment with a door that they can close to separate themselves from their kids, pets, spouses or roommates. Employees also need to have a desk where they can work, even if it's just a folding table. The company doesn't want people working in front of the TV with their computers on their laps or coffee tables.

Another aspect of the policy outlines the equipment Chorus will provide: in short, all the computing and telecommunications equipment workers need to do their jobs. This includes laptops, monitors, keyboards, headsets and Internet service. Client services reps get paper shredders because they have to destroy certain documents to comply with HIPAA regulations. In one case where an employee needed a chair, the company provided one from one of its about-to-be-closed offices.

Employees pay out of pocket for basic office supplies like paper, ink and toner cartridges, pens and Post-Its, and submit expense reports for those items.

Chorus also set up a policy on work hours and availability. Employees have to be at their desks in their home offices during normal business hours; they can't opt to work odd hours. All employees have to use instant messaging (IM). They also have to put their phone numbers and IM handles in the global address list on company's Microsoft Exchange Server.

In addition to these general work policies, Luz, the vice president of client services, says his group had its own specific, common-sense rules. For example, the reps can't have TVs or stereos on in the background. Nor can they eat while on the phone with customers. These rules are meant to send the message that even though employees work in a casual environment, they must maintain professional decorum while on the clock.

Every employee had to sign off on the new policies. Meanwhile, existing policies, such as those pertaining to computer and Internet usage, remain in place.

Plan for Remote Tech Support

One question that lingered for Chorus employees was how the company would provide tech support. It's not like a help desk staffer could walk over to someone's desk to troubleshoot.

The processes the IT group put in place to resolve technical support issues remotely ended up much like the measures taken when an employee was working at a client's office. But Chorus benefitted from advanced planning and some key work-arounds.

For example, if an employee is having a software problem, IT staffer Aron Schneider says someone

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simply takes control of the person's computer using remote desktop software like iTivity or by setting up a WebEx meeting. "If there is something we are trying to resolve or accomplish (loading Citrix at a client site, for example), the team will get on the WebEx and we will talk through the activity," says Boyd. "This is a good way of keeping contact and providing training and knowledge transfer."

If an employee's hard drive crashes, the IT staff replaces it with a loaner laptop it has preconfigured with all the basic software the employee needs to function. "If they're close enough where I can drive it out to them, I can make a swap," says Schneider, who is based in Texas. "If they're onsite with a client or in New Jersey, we FedEx it to them, and they send their laptop to us."

If an employee had to wait for a replacement laptop, he or she would still be able to check e-mail on a home computer and use a cell phone to make calls. But Boyd is aware that waiting for a laptop could temporarily impair the customer support team. He's looking for a software-based WAN accelerator to speed software downloads in case IT needs to get a fully configured replacement computer to an employee.

Boyd counts only one instance when he couldn't deliver tech support, though there were extenuating circumstances: When Hurricane Ike hit Houston in September, an IT staffer who was supposed to be replacing someone's laptop lost power. "I haven't had a lot of issues other than, 'It's really tough for me as a developer to move a big file,'" he says.

Maintain Camaraderie

Although most employees were delighted to start telecommuting, adjusting to the new lifestyle took more time for employees in Luz's client services department. His staff missed their daily social contact.

"You have to understand the dynamics of a person who is in customer service," says Luz. "They're very social creatures, and being in an office fills that social need we have."

So Luz brought his staff back into the Texas office two days week for three weeks, then one day a week for a few weeks more. Now they're all working from home five days a week, but they feel more comfortable with the arrangement.

Luz believes his staff had trouble adjusting because they couldn't get into a routine at home. Once they settled into a rhythm, the change became easier. But Luz knows his staff still needs some face time, so he's planning social get-togethers for his group every quarter. CEO Schreiber is also planning quarterly outings for New Jersey and Texas staffers to help them maintain personal connections.

Luz notes that if he were to go through this transition again, he wouldn't have his staff go "cold turkey" from cubicle life. Some employees outside of client services were also wary of telecommuting. As much as IT staffer Schneider was excited to work from home, he was concerned he'd be distracted by his TV and the contents of his fridge—and that he'd be bored without any co-workers around.

> **"WE WOULDN'T HAVE done this if it would have had a negative impact on our ability to serve customers."**
>
> –A.J. SCHREIBER, CEO, CHORUS

Schneider quickly realized he didn't have to worry. His home office is far enough away from both the TV and refrigerator. Some days he doesn't eat lunch until two or three in the afternoon because he's so busy, he says.

As for the social contact, he communicates regularly with his team. The IT department has a conference call every day, and Schneider keeps in touch with individual coworkers over the phone and via e-mail. "I really don't see that anything has changed working from home other than proximity."

Change the Way You Manage

Many companies resist telecommuting because managers don't know how to supervise staff they can't see and they aren't comfortable with the idea.

In a recent survey commissioned by office furniture manufacturer Steelcase, 62 percent of respondents said they think their employers prefer them to work in an office to prevent a lack of communication. Others believe their employers fear they won't be as productive.

Indeed, the adjustment to telecommuting may be hardest on managers since they need to fundamentally change the way they work. But those companies that don't allow telecommuting because they believe it's harder to measure remote employees' productivity are

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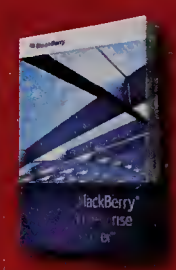

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making a weak excuse, says Luz. All you have to do is use the right tools.

Specifically, the dashboard that's part of Chorus's Cisco call-center system shows Luz when his call-center workers are logged in, when they're on a call, when they're on break, the duration of their calls, whether they answered calls to their extension, the number of calls they took each hour and whether calls were abandoned. Luz can listen in on calls, interrupt and record them.

He also uses Salesforce.com as a case management system for tracking customers' problems. Through the Salesforce.com dashboard, Luz can see every account manager's queue and the number of cases they've opened and closed. He says his staff has been "more productive from home than we ever dreamed they would be." CEO Schreiber concurs, although he notes that it's not as easy to track productivity in other areas of the organization.

The IT group uses Salesforce.com, too, for a "right now" view of what is happening in the department, says Boyd. To get visibility into his staff's overall workloads, Boyd holds a daily, hour-long meeting to review and coordinate everyone's activities.

Boyd also uses IM to keep tabs on his staff. "When you see them become active on IM, you know they're up and ready for business," he says. Boyd realizes that employees can log in to IM, or any system for that matter, and then walk away from their computers, so he pings individuals every once in a while to keep them on their toes.

Not that he needs to. Boyd says his staff's productivity—as measured by the number of cases they close—has increased since working at home. Everyone is working longer hours because they don't have to commute.

"I'll start answering e-mail at six in the morning, and I don't get up from my desk, with the exception of getting something to eat, until six in the evening," says Boyd, who adds that he often gets work-related instant messages from his staff even at 8 p.m.

IM helps the entire company stay connected. Employees and managers alike use it to discuss work issues and to chat informally. Boyd doesn't like it when he gets four simultaneous pings when he's on the phone or trying to concentrate, but overall, he thinks its an excellent replacement for the water cooler and for yelling over the cubicle wall.

The soft side of management is more difficult. Luz says, for example, that he has to make a concerted effort to reach out to employees and see how they're faring. "I call them each individually throughout the week to chat with them about how things are going, how their families are doing," he says. It's a type of interaction that was easier in the office. "I also need to make sure that I have them reach out to each other."

In addition to the informal phone calls, Luz, like Boyd, holds regular team meetings. Luz uses WebEx to bring his staff together twice a week.

Both Luz and Boyd say working from home and managing a staff of telecommuters have improved their management and communication skills. "I'm not sure I'd say it made me a better manager per se, but it has made me a better communicator," says Boyd.

CHORUS CIO RICK BOYD says his staff's productivity has increased. Everyone is working longer hours because they don't have to commute.

Telecommuting Works

In spite of the challenges Chorus has encountered, its transformation into a virtual company has proceeded so smoothly that many customers didn't even notice that the company has closed its physical offices. The effort to invest in the right equipment and plan carefully for how employees would interact with customers and each other has led to productivity and service improvements along with cost savings.

"We've been able to quantify that we are more productive now than when we had physical offices," says Boyd. "Our number of open cases has reduced dramatically and the time it takes to resolve them has been reduced dramatically. It truly has been a by-product of going 100 percent virtual." CIO

Our Guide to Telecommuting

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Senior Editor Meridith Levinson can be reached at *mlevinson@cio.com*.

To read and comment on a longer version of this story, go to *www.cio.com/article/437751*.

Time to Get Smart about IT Investments

Independent Insight on Microsoft Solutions: Insurance for Future IT Decisions

Turbulent economic times place greater pressure on IT leaders to optimize technology investments. Analysts everywhere are being called on to help IT decision-makers make the most of existing infrastructures. The smartest CIOs know that the most successful analyst partnerships start with focus on critical technologies that reach every corner of the business.

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John Clark, CIO of mobile industry giant Nokia, says *Directions* provides "invaluable, broad perspective" of Microsoft's roadmaps, products and organizational structure.

"It helps me maximize our technology investments and leverage our Microsoft relationship," said Clark. "It also provides trustworthy research that saves me and my team considerable time and effort." Clark adds, "If I only had [*Directions'* insight and guidance] for my other technology vendors then life would be great."

Think of it this way: Do you really want to compete with an organization that has this information when you don't?

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Do a full 360-degree assessment of each employee before making staff cuts, advises **Doug Cormany**, SVP and CIO at Preferred Care Partners.

Downsizing.
Rightsizing.
Resizing.
A layoff is still a layoff. But how you do it matters to the strength of your IT organization.

BY KIM S. NASH

Doing Layoffs Right

You know it: Preparing for layoffs will be a key part of the job for many CIOs in the months to come. Economic upheaval forces cutbacks in projects and people. Need a history lesson? Look back to the dotcom bust, then consider that the current financial mess touches many more industries and many more countries.

Showing good workers the door when business contracts is one of a leader's toughest assignments. The key to getting your department through layoffs with minimal damage is to downsize thoughtfully and decently. (Read "Careful With That Axe," Page 32.)

Doug Cormany, senior vice president and CIO at Preferred Care Partners, a Medicare Advantage Plan headquartered in Miami, has laid off technology staff a few times during his 30-odd year career as a CIO at the staffing firm Spherion and at the equipment rental company formerly known as NationsRent, among others. He never likes the task. What he dislikes even more are those instances he's seen of IT leaders doing it badly. Cormany, a member of our CIO Executive Council, spoke with *CIO* magazine Senior Editor Kim S. Nash about the right way and the wrong way of telling your people they've got to go.

CIO: IT layoffs have already begun. But not every CIO does it well. What's your experience with handling this kind of bad news?
Doug Cormany: I do that as part of doing turnarounds. At Spherion, for instance, we had numerous disparate systems and we knew that once we got over to PeopleSoft applications, we would have a reduction of workforce. So over the course of two years, I had to let go 152 information technology services people. I outsourced [another] 63 people. That's the biggest layoff I've done.

Reader ROI

:: Why you should plan for your "to be" organization
:: The need for comprehensive employee assessments
:: Common layoff mistakes

How did you figure out who would stay and who would go at Spherion?
We did an assessment of the skills of each IT employee. We had each one assess his own skills, then we had supervisors assess each employee. We had the next level—the directors—look at them. We also brought in [management from the]

PHOTO BY JEFFREY SALTER

business, to ask them about the people we had assigned to them.

Once we had that process finished, we said, "What is the 'to be' organization going to look like in two years? What skill sets will be needed? What did the job descriptions look like?" Then we started placing names in each position.

What happened to those employees whom you didn't slot for a position?
We asked ourselves the question: Do we need them to maintain old systems while delivering new systems? We were up-front with people. They knew at the beginning of the project that they were [either] working themselves out of a job or working themselves into a [new] job.

We sat with each employee and gave them three months' notice, six months' notice, nine months' notice, as the project was done in phases. In addition to giving them notice, we also gave them reasons to stay. They would get X number of weeks per year of service, if they stayed through the end of their assignments.

What else did you offer?
Job assistance, which entailed working to find them new positions in other companies or within Spherion but out of IT. A couple of people did move out of IT into the business. If they wanted it, we sent them to career counselors within the Spherion business unit.

Who conveyed all this news? You?
Either myself or my directors or VPs would meet with them, with human resources. HR was in step with this all the way.

What goes into the employee assessments?
We look at everything from their education, courses they'd taken on the technology or business side, to applications they'd worked on. Technical skills, management skills, partnership skills. They had to rank themselves [as] good, better, best in each area. Then a supervisor would meet with them [and we know that] somewhere in the middle is the truth, just like with a performance appraisal. We got an agreed upon assessment and we noted if any [items] were not agreed upon. We knew after the assessment who wanted to learn and who didn't.

"Different people take it different ways. This is the hardest type of severance."

–DOUG CORMANY, SVP AND CIO, PREFERRED CARE PARTNERS

How did you develop this method?
I've been in this business well over 30 years. This is something I had to learn early on. In my 20 years at Disney, during the fuel crisis of the 70s, I had to let a lot of my people go. I learned how to try and take the emotion out.

Different people take it different ways. This is the hardest type of severance. Disciplinary actions are different. But at Spherion we just went to a new technology and fewer applications to support. I'd say 95 percent to 98 percent of the people were OK.

How could you tell?
They didn't leave. People still worked on these projects and kept old systems running and worked the 10- to 12-hour days, six days a week during this hard time. They showed up and did a good job. We were meeting all delivery dates. We met every one. We only lost a couple [of people].

Top Downsizing Mistakes

For more advice about how to **HANDLE LAYOFFS**, go to **www.cio.com/article/198702**.

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They went off and found other jobs?
Right. Throughout the two years... some people whom we had questions about shined and some people whom we thought were keepers ended up not catching on to the new technology as well as we thought they would.

How do you explain that?
I don't know if you can. I don't know if they applied themselves more or enjoyed learning new technology. Some people—there's nothing wrong with this—but some people just want to be a heads-down programmer.

How did you deal with discouragement and morale issues along the way?
Coaching from management. At our monthly town hall meetings, we answered every question asked by any member of the team, no matter what. We always made sure to speak openly and freely, and to have fun. And sometimes, you make a decision to part ways. We did have a few of those, but very few. When you have to let people go, it is hard.

What layoff mistakes do you see getting made by CIOs?
The biggest error a lot of people make is they don't look at the "to be" organization. Know what you want to be, because [otherwise] the morale of your IT organization will deteriorate and you'll lose productivity.

I hear of companies that lay off 10 people this week, then five more the next month. Everyone's in fear for their jobs then. If employees see that every month there's a black Friday, they're going to be out looking for jobs. The best thing you can do is work up a layoff plan. Then deal with it: Do it once.

Why does that mistake happen?
As companies are losing revenue, they often don't know what they need to do. But they do know they have to cut expenses. So they go from department to department and say, "We need you to cut five percent of spending." Next quar-

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How to Recession-Proof Yourself

Five tips for saving your job when layoffs loom

Layoff fears are sending a shiver through the workforce as the U.S. economy lurches toward a full-blown recession. And no one is safe as corporate cost-cutters sharpen their axes. Though senior executives are less vulnerable to losing their jobs than the employees below them, they, too, can be casualties of restructurings.

Whether you're a CIO or a help desk technician, career coaches say you can take measures to prevent the hatchet from falling on your neck. Here's a list of actions they say you can take to help safeguard your job.

1. Know your value and communicate it. "If you're flying under the radar, you're going to be the first to be eliminated," says Kirsten Dixson, author of *Career Distinction: Stand Out by Building Your Brand*. This goes for CIOs, too.

Dixson recommends compiling a weekly status report that outlines the project or projects you're working on, your progress on those projects and your key performance indicators, and sending that report to your boss each week.

If you're known as a "growth and innovation CIO," now is also the time to prove that you're as adept at cost cutting as you are at generating ideas, says Joanne Dustin, a 25-year IT veteran who's now a career coach and an organizational development consultant.

Dustin says CIOs need to talk up the efficiencies and cost savings that their innovations have achieved as well as the revenue they've generated. Your company may still decide that it needs someone with a different skill set in the CIO role, but at least you've given it your best shot.

2. Be a team player. Getting along with others—in the boardroom or elsewhere—is critical when downsizing is on the table, especially for IT professionals who tend to be independent, says Dustin, who's worked as a programmer, project manager and systems manager. "These times require cooperation, flexibility and a willingness to go the extra mile," she says.

IT professionals who "just sit at their desk or in the server room and do their eight-to-five" are at risk, says Ed Longanacre, senior vice president of IT at Amerisafe, a provider of workers' compensation insurance. The problem with hunkering down, he says, is that it gives the impression that you're not interested in the organization.

3. Keep your ear to the ground. Staying attuned to what's going on inside your company, including gossip, can help you anticipate changes, says Patricia Stepanski Plouffe, president of Career Management Consultants. "If there's a rumor that your department is going to fold or downsize, you can identify other areas of the company where you could transfer your skills," she says. Just remember that you can't trust everything you hear, whether it comes from the water cooler or the CFO.

4. Adapt to change quickly. "If you can develop an attitude that nothing is going to stay the same and that your organization and your job will always be in flux, that will help you cope," says Stepanski Plouffe. "Be ready for whatever change may come up."

5. Get out and lead. "Executives are expected to set the vision and reassure people of the path the company is on," says Dixson. "This is not the time to go in your office and shut the door. Show decisiveness, strength and integrity. Show that you're combating the rumor mill."

--Meridith Levinson

ter, it's another five percent to 10 percent, until sales recover. Those are hard times.

How do contingency plans usually work?

A Plan A is best case. 'We hope the trend is going to be this' and there's a foreseeable uptick. A Plan B would be a 20 percent decrease [in spending] from Plan A. At my last three companies, probably 65 percent of [IT] costs couldn't be cut. It's things like maintenance, utilities, software licenses. Those are fixed. So that leaves travel, personnel and new projects. And training. Unfortunately, we always cut training. It's always a big target.

A Plan C is the worst case. If things really get bad, you're not going to do new innovation. You won't be able to get capital spending. So the people who are going to have to find new jobs are those who are working on the new stuff.

How are you doing in this current economic chaos?

My company is not so affected right now because our revenues are from Medicare. But our employees still feel it. With their spouses' jobs. With clothing, food. It takes a toll on productivity. We're all talking about it. Think about all the money companies are losing in productivity. I just announced two new projects. That keeps things going. I've been on the lucky side this time. CIO

Senior Editor Kim S. Nash can be reached at *knash@cio.com*. To comment on this article, go to *www.cio.com/article/461921*.

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Are You an Activist?

There's value trapped in legacy systems and business processes. It's up to you to be its advocate.

BY CHARLES BEARD

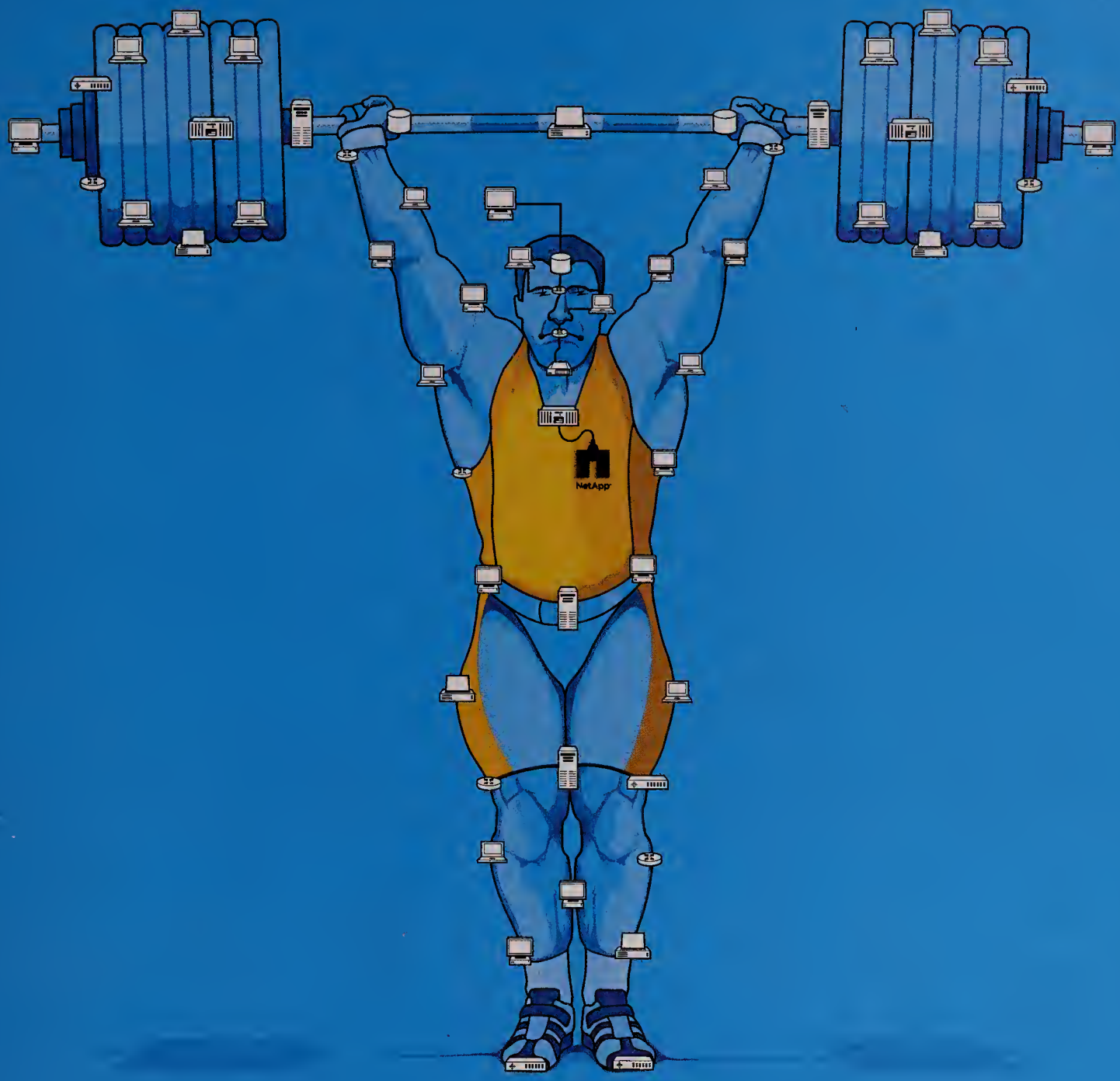
Name any industry that's challenged operationally or facing an uncertain future. Take financial services. This industry has been acquisition-focused for years, including during the upheavals of the past few months. But in many cases, such transactions occur in name only. The companies involved may change the signage and the stationery, but they don't change their business processes. The synergies promised to justify the transaction cost show up often as little more than goodwill on the balance sheet. As a result, significant, unrealized value remains locked up in what we might call "deferred mergers."

In this economy, there is greater urgency than ever to unlock that value, and I believe CIOs must be the architects who capture it (in partnership with the CEO or COO). CIOs are uniquely positioned for this role because they see the entire value chain, understand the costs of supporting multiple business models and architectures, and remain familiar with the technology road maps required to integrate businesses.

But not all CIOs apply this unique perspective in an activist way. Activist CIOs are businesspeople first and technologists second; they are focused on corporate business results and make their decisions through that lens. And they are willing to challenge the status quo as opposed to just asking the functional departments what their needs are every year.

Before coming to SAIC (Science Applications International Corporation), I often worked with companies that had deferred the integration of their acquisitions. I would lay out an integration strategy, quantify the costs incurred by the deferred integration and suggest ways to extract the trapped value. In some cases, I did that because the company's internal CIO did not have the will to challenge the status quo or authority to bring these issues to the business's attention. These CIOs had no voice at that table and were not materially involved when costs were originally estimated during due diligence.

In these engagements, as well as in my work at SAIC, I've learned several lessons about being an activist CIO in deferred merger environments.



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Emphasize Materiality

Materiality—a case based on the hard facts—is the best approach to convince the business to attack its unrealized value. Extracting value from a merger or acquisition is a business problem, not a technology problem. By presenting facts, you help people understand this problem from a dollars and cents perspective. It's not an academic exercise.

Activist CIOs are willing to challenge the status quo, as opposed to just asking functional departments what their needs are every year.

For example, SAIC has grown both organically and through acquisition. Much of our intellectual capital and technical know-how is embedded in the IT infrastructure of those once-independent organizations. We unlock that value by providing an agile platform for rapid response to the market, asymmetric innovation and collaboration capabilities.

To make this possible, the business wanted to get control of the line systems by migrating them to a centralized data center. But we in IT offered an alternative—a "virtual grid" that takes advantage of emerging technologies in cloud computing and virtualization. This approach reduces our energy and facility costs and provides enterprise IT governance without impairing line organization productivity. It's less expensive, helps us get to market more quickly and is more consistent with our business strategy than the alternative.

The additional value you identify when you emphasize materiality doesn't come just from taking out costs. You may have people in roles that they can't get out of because technology will not allow them to. They may be doing manual processes when they should be doing analytics—but can't move ahead because their systems and processes have become impossible to automate.

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Refocus on Results

As a consultant, I had great clients who pushed me. I had the opportunity to witness GE under Jack Welch, and Honeywell under Larry Bossidy, and to work with Herb Kelleher and Gary Kelly at Southwest Airlines. All of these leaders taught me about staying focused on the results, applying just enough technology to get what you needed and always developing solutions through the lens of business results.

One of my clients struggled for years to achieve the synergies of a major acquisition. The company had enterprise systems, most of which were unique to a specific business or location. The systems locked-in legacy business models and created barriers to achieve the business's vision. We rationalized those legacy systems by following a road map aligned with a business vision that was approved at the highest levels of the organization. Instead of reducing the number of systems to cut the operations and maintenance cost of IT, we instead followed a plan focused on improving operating margins of the company. Quarterly deployments demonstrated their value with quarterly improvements in multiple business metrics such as operating margins.

Become an Activist CIO

You don't have to work for a global conglomerate or consulting firm to develop this business-results outlook. Simply reflect on your own professional development plan and ask yourself whether it aligns with being a business-results CIO. If it reads more like a series of technical seminars and vendor conferences, then you have work to do.

Consider enrolling in an executive education class at one of the top business schools. There you'll find senior executives from multiple industries actively participating in the debate over IT's role in business, and they will challenge your thinking in a safe environment. Contribute to the dialogue on business challenges in business terms. This is critical training that all CIOs should consider.

To be an effective activist—to engage the business when it's wasting money or squandering opportunities for improved results—you also have to build relationships of trust. If the business leaders don't see you as someone who can conduct a results-oriented analysis and bring that kind of rigor and discipline to the conversation, it's going to be very difficult to get the opportunity.

It's equally important to develop your influence. Making people want to change is the secret to making things happen. One of the ways I do that is by making my ideas their ideas—by getting people to adopt and champion the ideas, and giving them the credit for success. When your colleagues see how you enable success for others, they will stop resisting change and become eager to work with you.

Finally, and fundamentally, to be a successful results-oriented activist, you must match your expectations for the role with those of your company. If the business wants a CIO focused on managing the internal IT function, it needs someone who is good at IT administration and keeping things running. An activist CIO would be a mismatch in that job. CIO

Charles Beard is SVP and CIO of Science Applications International Corporation (SAIC), and a member of the CIO Executive Council. To comment on this story, go to *www.cio.com/article/461924*.

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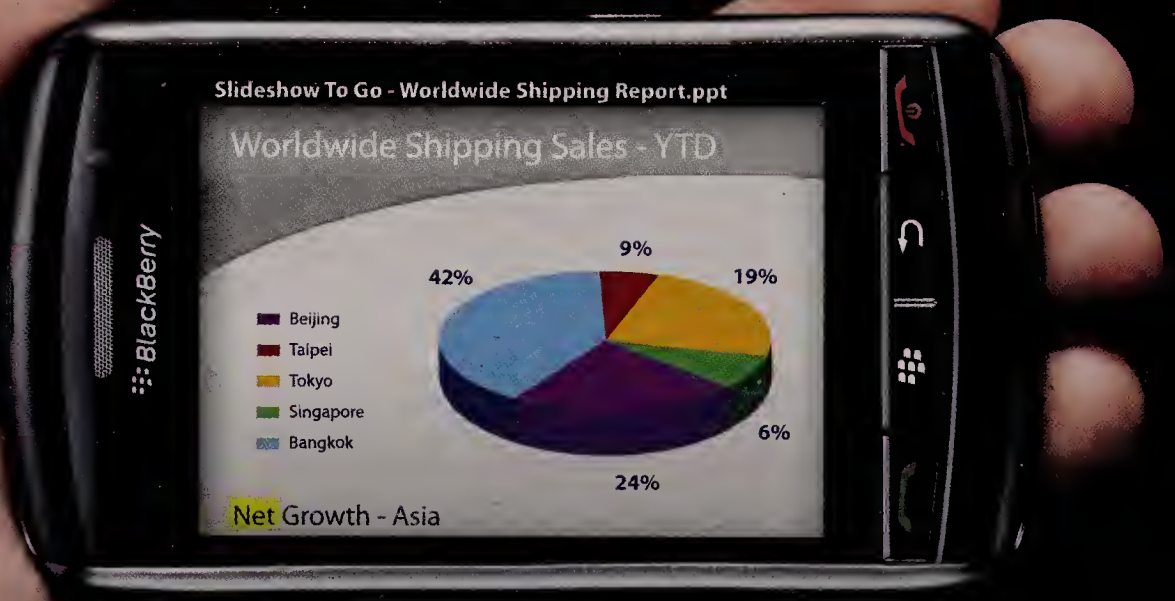

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